

**Buyer's Guide: Pentium PCs & Notebooks**

*Free*

CANADA'S COMPUTER INFORMATION SOURCE

# The **COMPUTER PAPER**

NEWS

REVIEWS

FEATURES

## **BUILD IT** OR **BUY IT?**

Should you  
build your own  
computer?

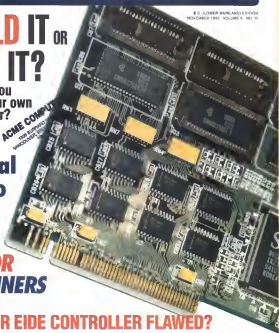
## **Digital Video**

LAB TEST:

## **COLOR SCANNERS**

## **IS YOUR EIDE CONTROLLER FLAWED?**

Up to 1/3 of PCs with a PCI bus are affected – is yours?



810 - CLOVER WAREHOUSE 610000  
REVISED 1995 - VOLUME 8 - NO. 10

# MEET YOUR BUDGET WITHOUT CUTTING INTO COMPUTER PERFORMANCE!

It's Back to School and Seanix Offers You the Best Value on Home Computers this Year!

## EDUCATION

### OFFICE



Using a Pentium processor-based personal computer video conferencing with your business partners is now very real and affordable. Our multimedia models also give you built-in high-speed 14.4Kbps modem with voice - messaging capability, allowing you to communicate between your home, office, or other remote sites.



Today's worldwide applications require the additional power of a Pentium processor in order to play back video and sound at acceptable speed. Using one of our Pentium 258MHz multimedia computers, your children will enjoy doing their assignments and will have hours of discovery through on-line encyclopedias and reference materials.

## ENTERTAINMENT



A Pentium processor-based computer will give you the ability to run the latest entertainment packages which make use of full motion video and provide you with hours of fun and exciting adventures.



### ASPI 9000 Multimedia Configuration 9P27900000 Pentium 258MHz

17" desktop/multitouch (2 touch)  
8MB RAM (up to 128MB)  
1,44MB Floppy  
32MB Enhanced IDE drive (16MB)  
10MB PCX VGA

37 Speed Internet CD-ROM drive  
Speaker system/16-bit sound card  
Workgroup software volume control  
No Microsoft Office pre-installed  
Internet 11.4Kbps/Modem  
MS-Office and more pre-  
161-key enhanced keyboard  
MS-DOS 6.22 pre-installed  
Windows for Workgroups 3.11 pre-installed  
3 Year Warranty Parts and Labour

Pentium 90MHz, 100MHz & 133MHz also available

Choice of ASi monitors from 14" to 17"



High Quality computers designed and manufactured in Canada  
1-800 Technical Support Hotline



**SEANIX INC.**  
8881 16th Street, W.  
Richmond, B.C.  
V6V 1K6  
Tel: (604) 273-1400  
Fax: (604) 273-1700

**SEANIX INC.**  
1790-7700 114 Avenue  
Calgary, AB  
T2C 0K6  
Tel: (403) 294-1144  
Fax: (403) 294-1000

**SEANIX INC.**  
4100-10th Street West  
Vancouver, BC  
V6P 4C7  
Tel: (604) 686-9000  
Fax: (604) 686-9000

**SEANIX INC.**  
2700 Lakeshore  
West Vancouver, BC  
V8V 1A1  
Tel: (604) 276-0800  
Fax: (604) 276-0811



# The Hottest VALUE ON CD-ROM



**\$94<sup>95</sup>**

## FLOW

*The best in business graphics*

- Includes 5,000 graphics (more than 100 on-line) as well as 100 fonts and thousands of clipart images and graphics
- Drag and drop drawing, multiple templates and 60 Smart Symbols Libraries
- Flexible object manipulation and extensive object contextual
- OLE 2.0 support, direct text editing and diagram and application drawing

*Available in both Windows and Macintosh versions*

Flow Graphics		
Category	Count	Size
Clips	1,000	16
Artwork	1,000	16
Diagrams	1,000	16
Font Libraries	1,000	16

*The world's best-selling clipart*



**\$46<sup>95</sup>**

- 10,000 professionally-designed clipart images (5,000 images in color)
- Selected images from over 50 categories
- Includes a full-color reference guide

## CATEGORY 2

- 15,000 clipart images (5,000 new images plus 10,000 from CorelDRAW® 1)
- 1000 photos and 500 fonts
- 10 video clips and 75 sound clips
- A powerful multimedia file manager
- Includes a full-color reference guide

*CorelDRAW® is the ideal partner for all of your word processing, presentation, desktop publishing and graphics applications!*

*Available in both Windows and Macintosh versions*



**\$87<sup>95</sup>**

*The best in graphics*



**200**  
TOP RATED  
SOFTWARE

## COREL DRAW!

- The ideal entry-level graphics package
- Includes precision type control, superb drawing system and amazing special effects
- Over 14,000 clipart images and symbols and 250 fonts

*This award-winning software is celebrated worldwide for its ease of use, incredible value and outstanding features!*

**\$97<sup>95</sup>**

*U.S. MSRP (Windows)*

*The best CD to complete your office suite*



**\$139<sup>95</sup>**

## OFFICE Companion

- Powerful workstation business graphics
- Personal Information Manager™ on Internet Web browser and fax software
- Electronic encyclopedia, dictionary, contemporary quotations, plus business, general and sports statistics
- Over 15,000 clipart images, 500 fonts, 200 photos and 75 sound clips

*Incredible power and value all on one convenient CD-ROM!*

**inmac**  
1-800-567-5992



**COREL**  
The world's most powerful graphics software  
CorelDRAW® 3.0 and Office Companion™



# For stellar PC performance, ask for the Intel Pentium® processor.



And with even more challenging software already on the way, you'll want to be sure to get the

The Intel Pentium® processor raises PC performance to greater heights. With a Pentium processor in your PC, you'll have the power to fly through today's demanding business

most powerful Pentium processor available. So for stellar PC performance, on your next PC purchase, ask for an Intel Pentium processor. Reach Intel on the Internet at <http://www.intel.com/procs/pentium/> for more information.

**intel.**

The Computer Inside.™

# C O N T E N T S

## TOP STORY



### 50 Build It Or Buy It?

The Method and Madness of Building Your Own Computer

by Lisa MacDonald

## E A T E R

### COMPONENTS

- 16 TCP Test Labs:  
Looking For A Few Good Scanners  
by Larry J. Ivers

- 32 Scanner Buyers' Guide

- 38 How To Get The Most  
Out Of Your Scanner  
by Captain Bobbie D.

- 34 Analytic A Scanner For Everyone  
by Carol MacDonough

- 31 The Delrina Winfax Scanner, and Two  
by Jeff Tynes

- 35 Yes, Hand Scanners  
by Jason Allen Roberts

- 39 ImpOS/2: A New Wave Image Editor  
by Jeff Woodhead

### CD-ROMS

- 42 Making Movies on Your PC:  
Three Digital Video Packages Compared  
by Ron Givoko

- 104 PC Video Capture Boards  
by Ron Givoko

### TECH TIPS

- 45 TCP Test Lab:  
Fast Movers - Pentium Notebooks  
by Lisa Votaw

- 46 Pentium Experts' Guide

### WIRE

- 77 PC BIOS Controller Fuses Discovered  
by Brady Givoko

- 83 Editorial: Windows Is Orphaned  
by Jeff Evans

## N E W S & R E V I E W S

### Books & Periodicals

- 56 Using a Media Release  
for Free Publicity  
by Douglas Gray

- 54 Budget Software:  
Surprisingly Adequate  
by Gordon Finkle

### SOFTWARE

- 59 Object Desktop:  
Supercharges OS/2  
by Jeff Woodhead

- 74 3D World Target: 3d3 Rules  
by Jeff Tynes

### Hardware

- 82 Amiga Is Dead,  
Long Live Amiga!  
by Jeff Evans

- 84 Stunning Color  
from Phaser 240  
by Clark Huber

- 85 Mac Digital Photographs  
as a Way of Life  
by Adrian C. Sogut

### TECH TIPS

- 86 TCC, Index For Web Arrive  
by Jeff Evans

- 90 Web Publishing Run  
by James MacIsaac

- 93 Libraries of the Future  
by Stephen P. Wicksman

- 97 Canadian Analogues  
on the Internet  
by John Robert Coleman

- 100 Universal General Long-Gut  
Virtual Film Festival  
by Jeff Evans

- 101 Interview: Point Survey Authors  
by Keith Schragli Roberts

- 102 Point Communications Top Sites

### PC & Mac Files & Programs

- 86 CD: Open Hearing Eyes to Art  
by Jason Allen Roberts

- 87 CD: A CD for Your Pet Project  
by Jason Allen Roberts

- 88 Camo: Flight Unlimited  
by Christine Everett

- 115 Kid's Software:  
What's the Secret?  
by Debra Annis

- 106 Book Reviews  
• 25 Steps to Self-Controlling  
• A Day With Jeff  
• Windows 95 Power Tools, Vol. 55  
• The E2000000 Connection  
• Using Email Effectively  
by Keith Schragli Roberts

### TECH TIPS

- 148 A Fresh Crop of Win 95 Tricks  
by Neal Howard

- 189 Cool Warp Tricks: Mark Areas  
by Jeff Woodhead

## D E P A R T M E N T S

- 4 News the Editor

- 7 Letters

- 9 What's New

- 106 Learning

- 112 Classifieds

- 112 User Groups

- 112 Calendar of Events

- 114 Marketplace

- 119 Computer Directory

- 122 Index of Advertisers

## COMING UP IN BC EDITION

### DECEMBER 1996

PCs for Sale: Consider Personal Energy  
Classifieds Mon., Nov. 4  
Ad Deadline Wed., Nov. 6  
Cover Story Thu., Nov. 8  
Distributions Fri., Nov. 29

### JANUARY 1997

Budget Windows: Start in Windows 95  
Classifieds Mon., Dec. 9  
Ad Deadline Wed., Dec. 11  
Cover Story Thu., Dec. 12  
Distributions Fri., Dec. 27

### FEBRUARY 1997

High Performance Pentium: Publishing  
Classifieds Mon., Jan. 6  
Ad Deadline Wed. Jan. 8  
Cover Story Thu. Jan. 9  
Distributions Fri. Jan. 24

Call Now  
(604) 733-5596  
for advertising  
information

Visit  
TCP Online

The Computer People.  
World wide web site at  
<http://www.tcp.ca>





[illegible]

I noticed in your article "No More Penals, No More Books," in EOP-September 1999, that you used a few Cymruised machines. You — unfortunately lost your accents — tested them with Nixos and then told your readers that these CPUs run fine! This is a very misleading statement.

Shortest ID gets a very small tip (the instructions) repeated many times in order to test the CPU performance. One of these 32 instructions takes one extra clock cycle on a Cx86 CPU because Cx86 has its own design. This extra clock cycle adds up to be many loops and gives a FIAT inaccurate reading of the CPU speed (up to 10 percent slow). Any other benchmark will give you the TIA's reading of ten percent slower to the actual number as a Cx86 (386 CPU).

It's Noting, says) a different institution like Cytix very well could have paid 14 percent (and)

**Keywords:** child sexual abuse; disclosure; social support; self-esteem

150 cycles, which yields quite good results. According to the Cyrix's manufacturer's comparison of typical 90-nm processors and its own 485, processor speed-boost of the busbar from 600 to 800 MHz can clear the way to one and one-half third-steps faster, Marlin Jyngli is a 90-nm yield, results showing the Cyrix 485 is 4.8 times faster than Cyrix's Performance Enhancement Kit model can reach 485 applications such as SAPCO and PC Bench 3.0 show that Cyrix 485 (C485) can slip up to a 15 percent overall performance increase. The newer 485's offering than Cyrix 485 is similar size (size compared to a 485) and American Cyrix compared to 2004 (90-nm) processor under a variety of benchmark tests and get results showing the chip is to be significantly faster and slower than a 90-nm Intel Celeron.

**Figure 1**

I read with interest the *Computer* article *Reaping a Clean Shave* by Cath Lee. I agree with many of his suggestions; however, I take exception to the authors' opinion here against DOS. I would hold off on the release of CHILDRIS in great disadvantaged parent areas. HELP (I just accept, move, etc.), — all essential DOS tools. If you only speak English, COMPUHELP could go and you there are more clinicians. DOS and CHILDRIS files that you may never use, but these documents will save you a whole lot of space. Reducing use a few suggestions I would add to find some training.

- Don't transfer with your computer the DOS operating system and your programs from the harddisk supplied (DOS/Windows manual and alternative DOS books). Also, insert another read through your program manual.
- Organize your directories (copy programs by default to your working files, the files you create using the software) as

[illegible]

Weld later to express our apologies to Keweenaw Canada Ltd. for an event that appeared in Gardner's TCF Ltd. that on Keweenaw Canada. Not only did we not the 1-800 number correctly but we sold much as before, the members we did the business to Pioneer Packard, which makes a commercial product.

For the second time around, the number  
 100-440-2222  
 100-440-2222

sub-directory of the program. It can be advantageous to locate working files in a separate "work" sub-dir. In C:\PC\MS\program name\ And if you have customized the configuration of a program so it will allow you to use a special directory for the configurations like I have two instances of you have your program directory in its original use location, backups of profiles and make it easier to move or install the software. And the backup. And I want that. And

need this, and it is. About 100 have the travel disks and working copies. If you only use 2 programs in a group of data files, since a year or so, get it off the hard drive and save it on a 3.5" disk, then delete it.

- Be regular. MONDAYS, not/for CHAIRS and before you first classes better produced by requesting while in a program? Follow up with CHAIRS C.
- Keep things in perspective. Don't justify over the importance of keeping a few small classes. But, while in another direction.

you have all hell on clip art on homepage that  
never get used  
Illustrated Lurid  
Chaos: 100

GL replies: "The key word I used was 'most,' & that I mean that the present DOD/Windows environment is biased towards a GUI interface so most users simply will never enter them. There that still are is hard that even with GUI will recognize the names of the ones they use and will obviously not want to define them.

# Get the Guide

If you're in the market for a printer but don't know where to start, you've actually come to the right place.



You know what it's like.  
The children, the systems,  
the decisions.

Then come, you're got the best thing  
to come along since parents themselves.  
The French Garden.

"**Shangjiyong** rose-honey, delectable"  
— helps you start out the season of  
romantic business and beauty

It's easy to follow and is explained in simple, straightforward language. And it's the black and white truth on everything you need to know before you buy.

The Printer Guide will help focus your printing needs now. And it will help you choose the right printer today and help you plan for what you need a little further down the road.



**Abstract**

Landed with tips, tools, and techniques that will simplify your landing process!

- Not easy to complete checklist
- Easy pointing tips
- Comparison printer (colours/green)
- Reduces when print quality is
- Information about your own job
- Your own job

The Printer-Chooser. It's ultimately driver and not well, helps you get exactly what you need.

## HF Products



LEADING THE CHARGE



WIN AKA 95

Allows you to

 Start

our Windows® 95 applications!

no doubt about it, Windows® 95—Microsoft's newest operating system, will change the way computers are used. To maximize the advanced features of its 32-bit applications, Windows® 95 will demand more from your hardware. COMEX has met the demand with their [www.comex.com](http://www.comex.com) website.

winner of the  
INFLUENCER PAPER  
Pulse's Choice for  
Best Homeowner  
(April 1995)  
See inside!



Microsoft's Windows<sup>®</sup> and a host of multi-media goodies to produce the ultimate in Pentium performance!

1.5 GHz 1.5 GHz  
 1.5 GHz CPU  
 1.5 GHz 1.5 GHz  
 1.5 GHz 1.5 GHz



**SUPERBITION.**  
PCI mother-  
board with

of synchronous cache, it blows the doors off the competition. Adding a multimedia PCI video card with 2 MB VRAM and a speedy 1.6-GB Mode 41-CD-ROM drive gives you speed to burn. We finish the system with a Quad speed CD-ROM drive, 16-bit sound card and a 14.4K bps voice/fax/data modem to make sure of the COMEX. Winpack K95-55CM5 leads the way in the Windows® 95 hardware marketplace.



Call us for your nearest COBOLCO Dealer  
COMPTON BUSINESS SYSTEMS, INC.

**Head Office:**  
#100-13750 Mayfield Place  
Richmond, British Columbia  
Canada V6V 2G9  
Tel: (604) 273-8088  
Fax: (604) 273-2818

**Branch Office**  
47-3610 29th Street NE  
Calgary, Alberta  
Canada T1Y 6Z7  
Tel: (403) 250-3086  
Fax: (403) 250-8009

[illegible]

**HAPPENED IN A THIRDPARTY PLACE** • IBM has just announced the ultimate desktop PC due this month or next: a Foreigner 90 laptop-based notebook that incorporates the industry's largest (21.1-inch active matrix screen, 26 to 32 1/2 million color pixels, MPEG II high resolution 30 frames per second full screen digital video digital signal processor (DSP) audio, quad speed (40-80M), 4-state expansion keyboard, FDD and PAL video input video digitizing, scanning and output, 1 GB hard drive up to 90 MB/3.5MB and a 23.5 Kbps internal modem. The system weighs about 7 pounds. A similar lighter version without portable for the 80-83M drive, is also available.

feature set and overall capability high.

Of particular note: the WorkCentre 250 comes bundled with WordBridge Pro, Apple's high-end OCB (Optical Character Recognition) software. A package that normally sells for around \$449, based on a currently ongoing TLP first lab evaluation, WordBridge Pro is one of the best OCB packages on the market, featuring distinctly good character recognition and beautiful page analysis for interesting page layout analysis, graphics table builders and histograms. Also bundled with the system is Delta



Proofer like for handling the being there. The WorkCentre 250 has been designed for the small office or home office with limited budget but high needs for scanning and communicating professional quality documents. The built-in 300 dpi scanner, when used with WordBridge Pro, allows printed documents to really be turned into word processed files. A full review of the WorkCentre 250 will appear soon. —BJ

Connect North America Ltd., 1-800-438-3534

# TIME



Following the demands of work and family is a greater challenge than ever before. An enterprise can benefit

by computer programs to help manage time, individual employees can benefit from time management systems.

Of course, many employees are still at a loss for how to manage their time. They are often overwhelmed by the



time management systems.

Others are so overwhelmed by the demands of work and family that they are unable to manage their time.

One being overwhelmed is the time that can help people to manage their time.

Time management systems can help people to manage their time.

The time of work and responsibilities that must be



managed.

and personal development can be managed.

## The new HP DeskJet 660C printer. Now you can take work home and actually finish it.



Taking care of business used to mean sharing time at work. Now, the new HP DeskJet 660C gives you everything you need to print office-quality documents at home.

- Treating the HP Print Quality technology starts with our 600 dpi to black and 480 dpi to color and gives HP's exclusive Resolution Enhancement Technology.
- Also features easy ink for color prints, more time and less cost.
- Prints unattended on plain paper, envelopes, photo, and transparencies.
- Prints in, easy to use color.
- Available with industry-leading 1-year warranty.
- Available for PC or Mac.

To see what you can accomplish at home, call now for a free "Time Management" sample page and the name of the authorized HP dealer nearest you. 1-800-367-5657, ext. 344. Or visit us at <http://www.hp.com> on the World Wide Web.

### HP Home Printers



**HEWLETT  
PACKARD**

**BYE-BYE P&G GETS A NAME** • Intel Corp. has added to its growing success in the personal computer market with the Pentium Pro processor, previously code named the P4. The Pentium Pro processor contains 3.5 million transistors, and is expected to be introduced sometime in the last quarter 1995. Initially it will be used in workstations, high-end desktop machines, and network servers. The Pentium Pro processor is expected to deliver the highest level of performance for 32-bit software using Intel architecture.

The name was chosen because of the high reliability of the "Pentium" name. G.C. Smith, Intel's VP of the Desktop Products Group, said in a press release that "the Pentium brand has an enormous level of loyalty in 95 percent," and believes that the "Pentium" name that processor will benefit immensely from this association as we introduce it into the marketplace." —BJ-B

**LEADS UNUSUAL UNDER \$1,000 BUDGET FUNCTION DEVICE** • Service Canada last month began shipping the Document View Center 250 a stand-alone, inexpensive, highly featured multifunction device aimed at the home and small office market. Information systems are devices that integrate faxing, scanning, copying, and printing into one unit. Having just under the 1000 line label has influenced several of the market leaders in the multifunction category the Document View Center 250, was an instant choice. Among the 1000 line ViewCenter 250 shapes the competition in this computer peripheral category by lowering the price of entry under the \$1,000 barrier while keeping the

O'REILLY ANNOUNCES PRELIMINARY  
INTERNET SURVEY RESULTS • O'Reilly &  
Associates, best known for publishing books

about the Internet, have released some preliminary results from a survey of Internet users that answers questions like how big is the Internet? and what kinds of people are using it? The Online Research Group is a subsidiary of O'Reilly & Associates that has completed "Defining the Internet: Dependency 1994-1995," which they claim is the first statistically defensible survey of Internet users. Final results will be available soon, but O'Reilly has released some interesting details from their census of online culture:

- women make up 34 percent of Internet users — a significantly higher percentage than previous estimates had projected.
- the online population is generally older than is thought, with the majority falling between 33-45 years of age
- online users generally fall into the medium to high income brackets, 43% earning between \$25,000 per year
- the Internet has penetrated pretty evenly into the business community,

Household Income (Percentages)



with highest concentrations in regions that include 20 western and those above 1,000 miles.

While the full text of these and desktop results are available to research groups only, other general findings will be made public. The full survey will provide information on other topics, including the types of Internet services (FTP, Web, Gopher) used and, users' perceptions of the Internet, and the role Internet information plays in making purchase decisions. — C.S.B.

Contact: O'Reilly & Associates 1-800-988-9938  
WWW: <http://www.wiley.com/oreilly>

**HOW TO IMPROVE SAFETY MONITORING** • IBM Canada has begun a two-stage search for its T502 kinds of video monitors, after the company discovered that some of them may have been improperly assembled. The affected monitors are not properly grounded, and may cause an electric shock, although IBM says no incidents have been reported.

The 12-inch monitor can be identified by a 113, 1170 or 1170S model name on the front panel. Actual model numbers are T502 followed by 001, 001 T50, T21, 001 or 004, and were manufactured after September 1991. —J.T.

Contact: IBM at 1-800-445-4444

**RESEARCH CYBERPACE POINT AND CLICK CYBERBROWSING?** • Online recently purchased its new Cyberlink 7.0 for Windows 95 in a special Cyberlink sale to the Royal Ontario Museum (ROM) by means of a series of 3D-linked signs connecting nearby members of the press had a hands-on opportunity to search for visitors on the info highway with the aid of the first 3D pre-release version of Cyberlink. Cyberlink contains the latest features set of any of the commercial Internet navigation packages were to use. It is designed for the Windows 95 environment and in addition to the usual Windows 95 user interface features, it uses CDE 1.0 to help people use the system, in small applications that make the Cyberlink use interactive Internet functions. With Cyberlink, you get a Web browser, Cyberlink News Reader 7.0, the browser, Internet Relay Chat, email via MS Exchange, Gopher and other search capability and remote access with Telnet. By taking advantage of Windows 95's multi-threaded multitasking, the user can access many features at once while Cyberlink causes the computer to follow a single point and click interface.

Cyberlink is expected to ship in November 1995, bundled with Delrina's WinCom 950 7.0, or as part of Delrina Connectix 95 which includes Win Fax Pro 7.0, TechTools, and WebCom 7.0. — J.

Contact: Delrina, 800-999-6000, or  
<http://www.delrina.com>

# out WORKING



## SONY CD-ROM DISCMAN™

The perfect, portable multimedia solution

Sony's new CD-ROM Discman™ with its included ROM/CD-ROM interface breaks up to virtually any laptop for high-powered productivity to go! CD ROM means portable information access, powerful presentation tools and interactive entertainment. And when you're not working, it's a state-of-the-art, full-function audio CD player, complete with lightweight stereo headphones. All just 1.9 lbs. and operating on 3 AA batteries. Sony CD-ROM Discman is easily to ROM to ROM.



Sony of Canada Ltd., Computer and Personal Information Division,  
411 Gordon Baker Rd., Mississauga, Ontario M5S 2S6 Tel: (905) 876-1434 Fax: 1-800-981-8299  
© 1995 Sony and Discman are registered trademarks of Sony Incorporated. Other names

# INTRODUCING TI EXTENSA. IT'S MORE MACHINE FOR THE MONEY.



## EXTENSA

### EXTENSA 486

- 80486 66MHz
- 100MB processor
- 10.4" Dual Scan w/
- 1000 Lines
- 11.1 to 16.1 in
- 1000 Lines w/ 400

### EXTENSA 386

- 80386 33MHz
- 10.4" Dual Scan w/
- 1000 Lines
- 11.1 to 16.1 in
- 1000 Lines w/ 400

### EXTENSA

- 80386 33MHz
- 10.4" Dual Scan w/
- 1000 Lines
- 11.1 to 16.1 in
- 1000 Lines w/ 400

**START  
DOING  
THINGS**

Today the portable is the gateway to something extraordinary. To experience this productivity there are a few critical 486 attributes in the TI family to make Extensa the choice of affordable portable computers.

The new TI Extensa 486 is the most extraordinary combination of light weight, power and affordability.

The new TI Extensa 486 gives you the power of a Pentium<sup>®</sup> processor for the price of a 486.

And the new TI Extensa 386/387 multimedia portable computer gives you CD-ROM and plenty of Extensa technology, to enjoy it. In fact, it is the only portable computer that doesn't have no compromise.

So, here you can start working better, start working better, start expanding your capabilities, start calculating the power of a Pentium processor 486. It's a multimedia and most importantly, it's a portable computer that makes your money work harder.

In short, you can start doing extraordinary things. Ask a TI dealer or call a phone call, 1-800-TI-TOL-80, E-mail: [ti@ti.com](mailto:ti@ti.com), Internet: [www.ti.com](http://www.ti.com).



**TEXAS  
INSTRUMENTS**

**AMERICAN**  
INSTRUMENTS  
1-800-828-8888

**AMERICAN**  
INSTRUMENTS  
1-800-828-8888

**AMERICAN**  
INSTRUMENTS  
1-800-828-8888

**AMERICAN**  
INSTRUMENTS  
1-800-828-8888

**AMERICAN**  
INSTRUMENTS  
1-800-828-8888

Some of the TI family members may not be available in all countries. Extensa and Full Power are registered trademarks of Texas Instruments.

As if our 3,000 online services weren't enough.



...the ... ..

THE UNIVERSITY OF CHICAGO PRESS



© 2000 Blackwell Science Ltd *Journal of Internal Medicine* 247: 399–406

## TECHNIQUE MOVING TOWARD NATIONWIDE VIRTUAL CLASSROOM

• **SchoolNet**, a national initiative aiming to link all of Canada's 14,000+ schools via computer and telecom technology, is apparently growing much faster than governments planned. **SchoolNet** is now targeting to link up 300 schools within a year of its inception.



September 1981. In fact, over 200,000 people were online within the first month, by October 11, 1981. By June 1984, over 1,000 schools were online, pointing to a post-up migration from mail orders to use of computers. The total number of

Canadian schools with a Scholastic reading test have risen to 2,500, or about one third of all Canadian schools. Students and teachers have accessed Scholastic's pay 4.4 million times since its inception in the fall of 2003.

At a recent demonstration at the William Lyon Mackenzie School in Toronto, students demonstrated to press publishers and industry figures how they are using the Internet via SchoNet to do research, talk to students around the world, and have fun.



William Lyon Mackenzie students Mark Dunn and Barry Tunney show (from left to right) the 1841 May President and CFC Col Neil Houston, Norman Frenschmidt, Jim Giesbert, Secretary of State, and the Honorable Arthur Eggington, President of the Treasury Board of Canada at the signing ceremony this year at Fort Snedden.

**EPSON**  
**HAS**  
EVERYTHING YOU NEED TO SUCCEED.

**PRESENTING THE COMPLETE FAMILY  
OF EPSON COLOUR SOLUTIONS.**

Rolling success is like success. And these days, success means colour. That's why we created the EPSON Colour Solutions. From the extraordinary detail of our 30-dot/cm screen and the breakthrough performance of our powerful inkjet and multimedia PCs to the Personal Document Station that feeds letters, digipages, movies, fax e-mail, CD-ROM, dvd and electronically file documents, and the amazing XPS illustration of our incredible EPSON Stylus PRO XL inkjet printer. These award-winning EPSON Colour Solutions are, quite simply the most technologically advanced products in their class. To discover your preferred Solution, Call the EPSON Connection at 1-800-BUY EPSON (1-800-898-3778), for details today. Because EPSON has everything you need to succeed.



© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 105–112



Page 4 of 4



1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 26



Received 12 November 2003; accepted 12 November 2003



First Documented Case: 1910 (Hollander, 1947)

An initiative that Winthrop views as breaking even more widespread and inclusive is going to the source of the movement of a few. Nations School for Project, which aims to connect all Native Nations (over 500) and their groups of nations under federal government jurisdiction to Winthrop, is set to open in August 2003, period. Chief Mervin, the National Chief of the Assembly of First Nations, urged his colleagues in First Nations schools and tribal councils to help implement the plan, to "enhance education reform in our communities." The First Nations hope to use Winthrop to develop educational and cultural centers on help develop native culture, their educational resources, and improve access to information and educational services to increase on-going growth.

In the course of using *Interact*, you learn the skills to develop general computer skills, problem-solving and problem-solving, and share learning with other students together on the national *Interact* or elsewhere on the Internet.

Contact the National SchoolPact Office: 800-285-8908 or [schoolpact@wisc.edu](mailto:schoolpact@wisc.edu) or The Assembly  
20 First Avenue, NE, DC 20002.

[illegible]

Microsoft's wide range of new programming tools, including several aimed at the 32-bit Windows 95 developer community as well as new programming styles for use with Windows 95 and a variety of other operating systems.

DOI: 10.1002/ajb.a.10000 Accepted for publication 10 November 2004

Visual Basic 4.0, Visual C++ 4.0, Visual Fortran 4.0, and 32-bit FORTRAN were all announced for Windows 95 product development. According to Microsoft, this range of new tools takes together will greatly ease the creation of

Continued on next page

EPSON

© 2009 Blackwell Publishing Ltd *Journal of Internal Medicine* 265: 105–114

Mon. - Fri.  
10am to 8pm  
Saturdays  
10am to 5pm

# Looking For A Few Good Scanners

BY CHRIS FISHER

For many of us, the addition of a color scanner to our personal computer system has seemed like a luxury we couldn't afford. For others, such as desktop publishers, graphic artists and computer animators, scanners are an essential part of the computing arsenal. If *The Computer Paper* didn't have a plethora of scanners scattered around our busy production departments, there would be little in the way of pictures and color in each issue.



Scanners from left to right, top to bottom: Agfa MultiColor 100, Sharp ZR-500, Umax Vista 45, HP ScanJet 3x, Canon 59-500, and Umax PowerLook.

As the cost of scanners continues to fall, the number of professional graphic artists they can be found in many offices where they are used for creating marketing presentations and effective technical documents. They can also be used for optical character recognition (OCR) to quickly turn paper-based text into computer-readable word-processed text files. Scanners are increasingly useful to many professions and in the home office. They provide a means for making documents and even send those documents (as digital images) to fax machines, printers, e-mail, and communication to others.

## The Captives

Scanners come in several varieties and are stored in different markets. Physically, we can divide scanners into hand scanners (flat and white hand-held scanners have been the most affordable as the average PC user isn't now single sheet-feed scanners) and flatbed scanners. As with video capture devices and digital cameras, some consumers look and a few real consumers. In this survey, we'll concentrate on color flatbed scanners.

We looked at 24 flat and 30 flatbed color scanners capable of pulling pictures on the same reds and reds machine processing with 10.8 million colors. The business can take digital prints about two million dollars of color, or 10.8 million color images (or "24 bit" images) — each color being 24 bits of information per pixel to describe its color. Value gives what is called a "true color" image as image with the closest approximation possible to a continuous color photograph.

We used an Agfa MultiColor 100 with 16 MB of RAM and an HP ScanJet 3x with 4 MB of RAM with the display set to 1280x1024 to test scanners on the PC platform and from Macintosh 7500/80 with 40 MB of RAM and 2 MB RAM on the other end to playing at 1280x1024.

## Critics

The main criteria for comparing the scanners in this review are image quality, price, flexibility, speed, loaded software, ease of

installation, and documentation. Several of the scanners were used by our Computer Paper production department to add a final word perspective to the system. Many of the images you will see were the best results in our various publications will have been captured on one of these devices.

## How They Work

Conceptually, it is easy to understand how the scanner in its most mode. The main components are a light source and a lens-shaped optical device (CCD) array. Usually, when you scan an image in a scanner, by a light source (the light is then reflected back to the image through a lens, and measured by the CCD). The CCD sends a photoelectric current to the light measurement in an analog voltage. This analog voltage is then converted to a digital value. The light source is then mechanically moved a very small distance down the image, where the whole process is repeated. The strips of digital scanned information are assembled into a non-pre-digital image in the computer.

## Agfa MultiColor 100

This popular scanner got top marks for looks. Having one on your desk could even turn your heads in how the whole package that accompanied the ScanJet 3x was printed. They are well thought out. When we tried the Agfa on our PC, installation was an absolute snap. The software configured OCR and was plugged in and the Play and Play software was. There was no mention from the software of additional anything from outside.

No more than a few seconds passed before we got a message indicating everything was OK. We used ScanJet 3x software to install under Windows 95 to improve some from the Agfa. We had a few problems getting the Windows 95 to install properly for the scanner (but support that has been much more in the way of the Windows 95 ScanJet 3x software). It combined that with the Agfa data. The copy of Windows 95 on the PC in the Lab doesn't have it is coming in going every time we install the system it has a new piece of

Continued on page 21









## A Few Good Scanners

Continued from page 34

hardware to deal with. The Agfa InScanPro has two 32-bit color digital and scans at 400x600 dpi at the hardware level up to 2400x2400 dpi through interpolation. It incorporates several of the scanners that are located on the basis of scanning speed. The Agfa ScanPro and the larger scanning area of the scanner discussed here.

### Canon 35-4000

The Canon 35-4000 is sold specifically for the PC market. It has the smallest footprint of all the scanners in this survey small enough that one may find space for it on a cluttered desktop. This 34-in image sheet scans up to 8.5 x 11.7 inches at 400x600 dpi. This scanner is probably more than adequate for a casual user. Provided that you do not need to scan transparencies (a flaw), it has transparency options on command pictures. This scanner is a good alternative to other budget priced scanners.

### Epson 35-12000

The Epson 35-12000 has won several awards for value and excellence including the Mac/Win Early Award and the Mac/Win Journal Five Apple Rating. It is a 40x60-in dpi 36-in scanner located in 2400x2400 dpi through interpolation. It is sold in two versions for the PC or Mac with all the features including, Adobe Postscript 3.0 and Real Time Preview. It is just the best and will deliver more.

Unfortunately, this most distinguished scanner cannot without the necessary software driver for as long as a year. As you can see, we were not scanning around to others to make it fit.

### Harvard Packet Scanner 3c

So, what's a scanner like the HP say? The Scanner 3c has been getting plenty of good reviews in recent months and priced here against its brothers, the 3c currently holds its own. This 36-in scanner offers hardware resolutions of 400x600 dpi. It can be scanned at 2400x2400 through interpolation. Unfortunately, it was unable to find the PC version. The scanner required time to scan, with good color.

One of our reviewers in the production department pointed out that the TPA3C has been found to be less sensitive than the one she was accustomed to. Unfortunately, each time you go to register an image, the 3c returned

only about a percent scan whether you scan one or ten. At least the picture size is quick, its right. It generally takes the microscopic picture makers and really it could be turned off. However, did someone still quite available and on balance, the 3c is an excellent product.

### Sharp 35-110

The Sharp 35-110 is a 24-in scanner capable of hardware resolutions of 600x1200 and 2400x2400 through interpolation. Scanners in general are quite plate looking devices. The Sharp is not exception, but it does something

that the look of a scanner gives of enjoyment. It makes the scanner on the hardware platform and more elegant by the speed of scanning and generally pleasing with the overall quality of the images we acquired. The preview was the quickest that we have seen.

The scan was only to set up at most a minute by the SharpScan as it is the scanner. We were obliged both the automatic color loader and the transparency adapter with the 35-110. The automatic color loader has a 30 sheet capacity and the film scanning unit scans at 600 or 1200 dpi. Scans sharp with

the 35-110 with or without software. That if you develop your image software that suits your needs, you can take the best part about for something under \$1400.

### Venus Vista 30

Of the two scanners we received from Venus, the Vista 30 is considered to be the best and we used this scanner before attempting the more pricing. VenusScan model discussed below. The installation was extremely easy. We simply inserted the supplied software on

If you're planning to move to Windows 95,  
August 24th wasn't the most important date.

It's the day you attend our seminar.



Everyone's excited about the Windows® 95 operating system and now that it's here it's your job to get your company up and running. That's why we're offering a How to Migrate seminar through our Authorized Technical Education Center.

### Who should attend?

The seminar is for support professionals in organizations who need to know how to plan and carry out the migration to Windows 95. You'll learn how to plan for the move to Windows 95, roll out your new operating system to your organization and about the tools that are available to help you.

This valuable seminar is only \$300.

You'll receive a \$250 coupon towards a future Supporting Windows 95 course, and a free Windows 95 Migration Planning Kit CD,\* which includes the Windows 95 Resource Kit.

**Microsoft**  
SOLUTION PROVIDER  
Authorized Technical  
Education Center

Receive \$250 off a course

Supporting Windows 95 course

and get a free Windows 95

Migration Planning Kit CD\*

when you attend our

migration seminar

To find out about  
upcoming seminars  
nearest you, call  
(800) SOLPROV

## Bits Bits Bits

To get 48 million plus colors from a scanner, theoretically at a cost of \$400. Each pixel is represented by three sets of eight bits which gives 2<sup>24</sup> possible colors. It is the power of 24 equals approx. 16.7 million colors which as some like to know as the color of photosynthesis (pink). However, most color image resolutions cannot do that get the full eight bits of data for each color channel. Most rely on four-bit bit scanners. They use the same range to pack up more information. The aim is to pack up the full eight bits per color channel resulting in images that are true to the source. This technology is a little interesting, since the actual scan is still represented by 48 bits. —TF

\*Offer good while supplies last. ©1995, Microsoft Corporation. All rights reserved. Microsoft Windows and the Windows logo are registered trademarks of Microsoft Corporation. (08/95/94)

## SCANNER SURVEY

FULLY LOADED WITH  
PROFESSIONAL SOFTWARE



Can a colour printer or scanner that would look great in your home prove as useful? Then go to [franklin.com](http://franklin.com) or [franklin.co.uk](http://franklin.co.uk) for colour names from Apple. Easy to apply, resistant to use, it's the best way to add colour to your PC or Macintosh – and everything else goes with it.

	EnduroStar	EnduroStar RS
Typical installation	100 x 1000 gpg	100 x 1000 gpg
Maximum combined	1400 gpg	1400 gpg
No. stages	14/16	16/16
Water management	FlowStar (standard) optional	FlowStar Light
Drainage technology	FlowStar-M, FlowStar	FlowStar-M, FlowStar
Image processing	FlowStar (standard) optional	FlowStar (standard) optional
OCB reference	Chemplex Domo	Chemplex Domo
Estimated initial price	\$1.297	\$1.379

☐ Yes ☐ No ☐ Don't know

© 2000 Blackwell Science Ltd *Journal of Internal Medicine* 247: 105–112

---

---

Apple Computers, Super Mac,  
775 Hillfield Road, Henderson, Ontario L4R 1A1  
Tel.: (416) 291-2000; computer videos available from Apple  
Direct and on-line access: TELNET

**AGFA** 

Figure 1001 card plugged in the system ran the installation and went away. We were supplied with a default address which worked fine. We used Cool Transitions 4 to export images through UBB4 Technology's interface. You'll notice

The default settings were a little on the dark side for the photograph we were examining, but this was easily rectified. The *Linear View* (L) populates windows with a hardware-managing resolution of 4096x3000 dpi, which can be boosted to a very healthy 14400x9000 dpi through interpolation. While we've exactly started shopping new clothes for Windows 95 and our attire in the Power Mac in their complete and wonderful *Outfit*™ kit.

The *Miller Powerbook* is in a league of its own. Unlike the other reviews in this series, this issue is designed to meet the needs of demanding "graphic" people and multimedia professionals.<sup>1</sup> The *Powerbook* has had more editions of 4096x800 and closer to

scanning speeds by virtue of a 2.4-MHz output buffer and a proprietary bar coding design. Through interpolation, the scanner can do a whopping 1600/000 which is much more than our core production machines are capable of.



© 2000 Blackwell Science Ltd  
Journal of Internal Medicine 247: 399–406

We are torn between the *Chang* [C-DB] and the *Chinese Periodicals*, and at least one member of the Publications Department prefers the *Chang* over the *Chinese* at this point in time. They are, in fact, divided at different markets. The Periodicals is mostly the leading publisher, and has no intention, they believe, of losing the ability to continue that came with the *Chang* [C-DB] site as well as the *Newspaper* industry that came with the *Chinese Periodicals*. We take the Periodicals as the most capable source to develop publishing. The fact that it has dropped in price by 30 percent makes this somewhat more attractive choice.

Figure 1 consists of four bar charts, each representing a different level of agreement with the statement: 'The government should do more to help people who are struggling financially'. The y-axis for all charts is 'Percentage of respondents' ranging from 0 to 100. The x-axis for all charts is 'Level of agreement' with categories: 'Strongly agree', 'Somewhat agree', 'Somewhat disagree', and 'Strongly disagree'.

- Chart 1 (Top Left):** Shows the highest agreement, with 'Strongly agree' at approximately 65%, 'Somewhat agree' at 25%, 'Somewhat disagree' at 5%, and 'Strongly disagree' at 5%.
- Chart 2 (Top Right):** Shows moderate agreement, with 'Strongly agree' at approximately 45%, 'Somewhat agree' at 35%, 'Somewhat disagree' at 10%, and 'Strongly disagree' at 10%.
- Chart 3 (Bottom Left):** Shows lower agreement, with 'Strongly agree' at approximately 30%, 'Somewhat agree' at 40%, 'Somewhat disagree' at 20%, and 'Strongly disagree' at 10%.
- Chart 4 (Bottom Right):** Shows the lowest agreement, with 'Strongly agree' at approximately 15%, 'Somewhat agree' at 35%, 'Somewhat disagree' at 35%, and 'Strongly disagree' at 15%.

If you are looking for a warmer and a little spice on the old game itself, the ACFA Seattle Snow Day, and the House Wine-It are both very good, and I like 'em. We again choose the UGA Wine-It to track the a chance. It was easy to track and the score was 1.3

# How To Get The Most Out Of Your Scanner

Andy Greene

BY CHAINE BENNETT

When you purchase a scanner before using it, you're not getting the most out of it. Here are some tips to help you get the most out of your scanner.

## Point programs

Most scanners also ship with a point-and-click application for managing your scanned images. These programs give you complete control over the scanning process. Obviously, you can better off to get a full version of a program than a limited version, but often you can upgrade the "light version" to the full version for a not too many dollars. It might even be possible to find a better deal on a full version.

For example, if you get a scanner that includes Adobe Photoshop, if you get the full version, you can upgrade the "light version" to the full version for a not too many dollars. It might even be possible to find a better deal on a full version.

## OCR programs

In addition to scanning, you can also use your scanner to scan documents and convert them to text. While OCR programs often produce less than perfect results from low-quality images, they can be used to scan documents and convert them to text. While OCR programs often produce less than perfect results from low-quality images, they can be used to scan documents and convert them to text.

The most common kind of OCR software automatically scans the scanned image and converts it to text. While OCR programs often produce less than perfect results from low-quality images, they can be used to scan documents and convert them to text.

For example, if you get a scanner that includes OCR software, you can upgrade the "light version" to the full version for a not too many dollars. It might even be possible to find a better deal on a full version.

Other software goodies. If you're lucky, your scanner might also come with a full version of a program for managing your scanned images. These programs give you complete control over the scanning process. Obviously, you can better off to get a full version of a program than a limited version, but often you can upgrade the "light version" to the full version for a not too many dollars.

For example, if you get a scanner that includes OCR software, you can upgrade the "light version" to the full version for a not too many dollars. It might even be possible to find a better deal on a full version.

Other software goodies. If you're lucky, your scanner might also come with a full version of a program for managing your scanned images. These programs give you complete control over the scanning process. Obviously, you can better off to get a full version of a program than a limited version, but often you can upgrade the "light version" to the full version for a not too many dollars.

## Scanning tips

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

## Getting the most out of quality

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.



When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

## Buying the right unit

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

## Interface

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.

When you scan a document, keep the glass of your scanner clean. Don't use a cloth or paper towel to clean the glass. Instead, use a soft, lint-free cloth. This will help you get the most out of your scanner.



RUMOUR HAS IT  
THEY ALL SHARE  
THE SAME HUBBY



## INTRODUCING HUBBY™: THE NEW OFFICE PARTNER EVERYONE WANTS TO SHARE

Just when you thought the world was getting a little too complex, network technology has become a lot easier. Introducing Hubby™. The unique, plug and play, five-port, 10Base-T Ethernet solution from D-Link, the #1 managed hub supplier worldwide.

Designed for connecting small workgroups to a network, Hubby provides the simplest in ease and convenience. It's portable. It's lightweight (115 grams to be exact). And it can be installed into the tightest spaces.



Best of all, Hubby makes networking accessible to everyone. All it requires is a key-board's power extractor or AC power adapter and it's ready to go.

No, Hubby's not your ordinary office partner. It's a whole new way of working. So get yourself a new Hubby today. And don't be afraid to share. After all, that's what networking is all about.



Call for information about our Fast Ethernet Adapters and Ethernet Cards. For more information or for the name of the dealer nearest you, call



1-800-D-LINK CANADA  
1-800-354-6522  
Fax: (505) 526-5663

**D-Link**  
Commitment to Connectivity

DL-1000

Hubby is a trademark and D-Link is a registered trademark of D-Link Corporation.



# A Scanner For Everyone

BY GEOF WHIELWRIGHT

## ANALYSIS

After personal scanners first began to bring their pricing, but if the new products launched in recent months are

any indication, thousands of more may soon have a truly single-sheet scanner built-in their personal computers and their printer.

Major manufacturers such as Epson and Fujitsu have made a big splash with their

sub-Epson scanners which allow users to "photocopy" images not just from paper to the computer's screen. These systems typically feed the paper into the scanner directly above either into waiting you to place it on a glass surface (as in business-

only the case with more expensive flatbed scanners).

Many users are now considering using their scanners as a potential solution to the urgent problem of how best to manage paper-based records. Their solution lies in putting their inexpensive scanners with software for digital imaging, optical character recognition (OCR) and document management.

Using standard personal computer fax modems, it is now easy to send information directly from your computer screen to someone else's fax machine or computer — and receive messages to your computer.

With digital imaging, computer software takes electronic "pictures" of all the paper documents you run through your scanner and stores them as digital images on your computer's hard disk. You have achieved the goal: scans. The resulting images — say of a page of text — is just that: a picture. Another piece of software handles OCR. OCR allows your computer to read the text information in the image file and turn it into a text file that can be imported into a word processor for editing. Moreover, document management technologies for the original image and the OCR file together, indexing them in some manner so that the documents can be retrieved and managed more effectively.

Another big driving factor behind document management systems is the increasing use of personal computers to send and receive fax messages. Using standard personal computers fax modems, it is now easy to send information directly from your computer screen to someone else's fax machine or computer — and receive messages to your computer.

The difficulty has been in getting paper documents into the computer for indexing. In order to use a fax modem to fax a legal document, which requires you to file the message, you must physically turn to a scanner to scan the document into the computer first, and then use the fax modem to send the scanned image to a fax. In recognition of this requirement, fax software vendor Delrina earlier this year introduced a version of its WinFax software with a Fujitsu personal page scanner built into the product (see review elsewhere in this issue).

According to Delrina co-founder Mark Magister, the scanner will soon be long-

## ANNOVA Business Group

### Business Class

#### 486 Business Class 486 Pro Series Workstation

256 MB Cache 8 MB RAM  
40 MB 386 Hard Drive  
PQDOS, Real Time software, 20 Serial  
2.5" 1.44 MB floppy disk  
PCI 100 Video Card  
67" Ben International Low Radiation Color Monitor  
Internal 3.5" 40 MB Cache/16 MB RAM  
486 Pro Enhanced 80 Key Keyboard, 486 Pro Mouse  
486 Pro Win Server Card with 256K Power Supply  
Windows 3.0 or 3.11 Windows for Workgroups  
Monthly 1 Year Contract Parts & Labor

\$1,798.00



### COMPAQ File Server

#### Compaq ProLink 486

Feature 925 processor  
1 GB hard drive  
Serial and sync capability for future feature processors  
256 MB secondary write-back cache/20 MB  
40 MB 386 Hard Drive  
PQDOS/20 MB  
60MB/20 MB cache, enabling 486 and 486/256  
Integrated Video, 1.44 MB Cache/16 MB RAM  
Integrated 80 Key Keyboard, 80 Key Mouse  
Integrated 100 Video Card  
2.5" 1.44 MB floppy disk  
67" Ben International Low Radiation Color Monitor  
Internal 3.5" 40 MB Cache/16 MB RAM  
486 Pro Enhanced 80 Key Keyboard, 486 Pro Mouse  
486 Pro Win Server Card with 256K Power Supply  
Windows 3.0 or 3.11 Windows for Workgroups  
Monthly 1 Year Contract Parts & Labor

\$4,599.00



### Business Class

#### 486 Business Class Pentium Pro Series System

256 MB Cache 8 MB RAM  
40 MB 386 Hard Drive  
PQDOS, Real Time software, 20 Serial  
2.5" 1.44 MB floppy disk  
PCI 100 Video Card  
67" Ben International Low Radiation Color Monitor  
Internal 3.5" 40 MB Cache/16 MB RAM  
486 Pro Enhanced 80 Key Keyboard, 486 Pro Mouse  
486 Pro Win Server Card with 256K Power Supply  
Windows 3.0 or 3.11 Windows for Workgroups  
Monthly 1 Year Contract Parts & Labor

\$3,128.00



### XEROX

#### Series Document Center Systems 20 and 25

Improve the productivity and convenience of printing documents, saving space and, and meeting increased demand without increasing your PC. The Series Document Center Systems 20 and 25 offer you a cost-effective, convenient solution to the often-misuse of desktop and paper space, printing separate and scanning documents. Repeat or finish-to-fit your present setup, provide a solution for the increasing volume of document processing, offered in the Series Document Center and 486 Pro Series Workstation.

Call 800 Office Automation and speak to your Xerox Representative today for more digital text images and product demonstrations.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Prov. \_\_\_\_\_ Postal Code \_\_\_\_\_  
Phone no. \_\_\_\_\_  
Fax by: ☐ VISA ☐ MC ☐ Cash \$ 99.00 ☐ \$ 199.00 ☐ \$ 299.00

Please allow 4-6 weeks for the course materials.  
\*Orders must be paid in full.

**One-Day Course** **AND EDUCATION DIVISION**

WINDOORS  
250 W 2nd Ave.  
Tel: 416-463-0000

KANSAS  
2271 Kingsway Ave.  
Tel: 416-257-7777

COQUITLAM  
160-2525 Westwood St.  
Tel: 416-463-0000

VICTORIA  
1010 Yates St.  
Tel: 416-463-0000

KELOWNA  
KAMLOOPS  
CALLARY

EDMONTON  
WINNIPEG  
TORONTO

AST. COMPAQ. IBM. XEROX. XEROX. XEROX.

## MULTIMEDIA

### PENTIUM 90

- INTEL P90, Triton Chip Set
- 4MB RAM
- 1.2 GB Hard Drive
- 4X Techrise CD-ROM
- Sound Blaster 16
- 28 Watt Speakers
- Diamond Stealth 32MB Video
- 18" SVGA Non-Interlaced Monitor
- 19" Tower Case
- Enhanced Keyboard
- CD Triles

**\$2549** or \$91/month

Upgrade to P100 for \$100

### PENTIUM EDO-120

- INTEL P100 PCL Triton Chip Set
- Pipeliner 8000 Cache
- 32MB EDO RAM
- 1.2 GB Hard Drive
- Techrise IDE Controller
- 4X CD-ROM
- Sound Blaster 16
- 32 Watt Speakers
- Diamond Stealth Video
- 18" SVGA Non-Interlaced Monitor
- 19" Tower Case
- Enhanced Keyboard

**\$3899** or \$70/month

### STARTER PENTIUM 90

- INTEL P90, Triton Chip Set
- 4MB RAM
- Enhanced 40 MB IDE Hard Drive
- 32MB PCX Video Card
- 18" SVGA Non-Interlaced Monitor
- 19" Tower Case
- Enhanced 101 Keyboard

**\$1899** or \$50/month

## YOUR SYSTEM SPECIALISTS

- All Pentium workstations come with:
- USB Floppy Disk
  - Upgradeable to Pipeliner cache
  - CPU Upgradeable to 100MHz

Y2K!

**TRAC  
6X CD-ROM  
\$399**

Upgrade  
to Windows 95  
for \$99  
with any  
CD-ROM system

### DIAMOND

Winbench 95 Performance



Winbench 95 Performance



**Complete  
System  
Checkup  
\$39**

**CALL US FOR  
UPGRADES**



**CSC**  
COMPUTERS

Call: 980-6373 or 420-1655  
Fax: 980-2077 or 941-8855

323 Lynn Avenue  
North Vancouver, B.C.  
V7J 3G4

IBM

MSI

ASTRA

Open 10 AM to 8 PM Monday to Friday  
Open Saturday 10 AM to 5 PM



NN<sup>in</sup> N Toy Makers is the story of two friends, Nikolai and his toy cat Neon-News, who set up their own toy making company. Their greatest advantage in the competitive toy market is their location—the North Pole! Enjoy the antics of these entrepreneurs as they try to meet Santa's Christmas demand. This captivating story will offer both children and adults endless hours of education and enjoyment.

For Windows® and Macintosh®

Age 4+

**\$24.95\***

# NN<sup>in</sup> N toy makers

An interactive storybook on CD-ROM

*More multimedia fun from Corel:*



**\$24.95\***

**Wild Cards™**  
The fun way to learn  
popular card games!



**\$24.95\***

**Nikolai's  
Trains™**  
An interactive journey  
on the rails!



**\$24.95\***

**Wild Board  
Games™**  
The fun way to learn  
popular board games!



From the  
makers of  
CorelDRAW

**COMPUCENTRE™**  
VISIT THE LOCATION NEAREST YOU!

\*With the applicable retail store CD price list.



**COREL®**  
Call us for local information  
1-800-393-9333  
©1998 Corel Corporation  
All rights reserved.

## A Scanner For Everyone

Continued from page 24



standing demand of Windows users. "We know that the most frustrating aspect of computer buying that most business users describe is not being able to find a piece of paper using Windows," he explained. "So we found a reliable hardware manufacturer and [have] licensed a smaller personal scanner to be called 'Deluxe Windows Scanner' that is priced lower than the cheapest flat scanners. It will be marketed directly to Windows users."

According to US research company IDS Strategic Consulting, the personal scanner is now cheap enough — and finally offers high enough quality — that many users can now consider using them. "This changing category promises to grow significantly over the next few years, as users discover the benefits of PC-based document input, and as more products become available," says Hilary Hinch, director of scanning market strategies at IDS Strategic Consulting.

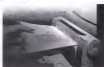
Meanwhile, the personal scanner to get the most attention earlier this year at Spring Consumer in Atlanta, came from a little US start-up company called Visioneer — which recently arranged for its US\$199 Visioneer PaperPort 2.0 system to be installed in the trade show game room and had hundreds of people take a look at these machines through their piers during our trade week.

PaperPort 2.0 for Windows is not just a scanner. The hardware comes with software that provides you with a one "personal Wang system" that can hold images, enhance, rotate, pan, zoom, and rotate capabilities, direct links to more than 20 third-party applications, a built-in OCR package and a higher scanning resolution. PaperPort is also available for Macintosh, but the filing software isn't as advanced as all the Windows version.

One big difference between PaperPort and existing scanning products is that it provides direct links to more than 20 leading desktop applications, such as OCR, fax, contact management, and document

management. By dragging and dropping a document onto one of these links, PaperPort's AutoLaunch streamlines the application and places the PaperPort document within the application.

Among the links included in PaperPort 2.0 for Windows are three OCR software packages, Corel's ScanPage and Windows and Xerox TextBridge, all capable Windows file applications. ImageJ, Bonsoft and ZipAid, Zipfile Utility, Cyphersoft Cypherscan, and Corel CardScan.



PaperPort 2.0 for Windows is not just a scanner. The built-in software will enhance the problem you with a new "personal filing system."

**X** Five functions. One machine. A Xerox Document

For the latest deal, quiet or more information

WorkCenter™ 250 makes it simple to do your best

call 1-800-ASX XEROX. Or visit our site on

work over night at home. Because it's

the World Wide Web at

got everything you need to be more



<http://www.xerox.com/info.html>

productive, more professional

You'll find the Document

We've even included TextBridge

WorkCenter 250 truly is a simpler

Professional Edition® software, so you

way to do good work.

can scan any document into your own

**WORKCENTER 250**  
The all in one office partner

word processing and edit immediately—no rekeying

**XEROX PRINTERS**  
WHAT'S ON YOUR MIND ON PAPER.

And you'll find the Document WorkCenter's as easy

to afford as it is to use. Plus our Service While You

Sleep program means if you should have a problem,

you'll get a free replacement the next business day

**THE DOCUMENT COMPANY**

**XEROX**

**Coming Next Issue:**  
**New Software**  
**adds features to the**  
**Visioneer PaperPort**

computer



1994 World Encyclopedia  
(New York, N.Y.:  
Macmillan, 1994), 1009.

Tel: 732-8090  
Fax: 732-8091

**Tech Support:**  
730.460.0000

[Home](#)
[Contact](#)
[Feedback](#)

**PLEASE CONTACT US AT:**

1998. *Journal of Applied Behavior Analysis*, 31, 1, 1-12.



Intel Pentium® 90 CPU

**\$1.729**

## Frontier's Upgradable System

#### FRONTIER'S FAVORITE OPTIONS:

1970 P.A.M. to 1980	\$215	1980 to 1990	\$25	1990 to 1995 Member	\$250
1970 P.A.M. to 1980/1990	\$240	1990 to 1995 Non-Member	\$15	1995 to 1996 Member	\$250
1990 P.A.M. to 1995	\$240	1995 to 1996 Non-Member	\$15	1996 to 1997 Member	\$250

### TWO-YEAR PARTS AND LABOR WARRANTY



Call us for your Winconsin MT (Land  
Service) Network Solutions

**FREE INTERNET ACCESS**

[POP3 Dial Up](#)  
[Internet Email](#)  
[FTP Site](#)  
[Internet News](#)

HP 34 Series 1000	\$200
IBM 1000 2000 Model	\$240,000
Windows-95 (Type 1)	\$12
Perseus 2048 CD-ROM	\$79.95
Quantum 80000	\$200
Compaq 1 2000	\$240
Master Webcam 200	\$200.00
SuperSpeed 20 1000 Mod	\$20
SuperSpeed 20000 1000	\$20

## WIN 8MB RAM

SEE OUR NEW INTERNET STORE FOR DETAILS  
<http://www.fronet.com/>

Over 14,000 people is available at any time.

See us for all your new products

- **Special low-price hot products**
- **Order electronically from your PC**  
(Please call for Internet access)

# The Delrina WinFax Scanner, And You

BY JEFF EVANS

## Delrina WinFax Scanner

Scan, Copy  
Price: \$225 (delivered)

Also available: Fujitsu ScanPartner 2  
Scan: Fujitsu Canada  
Price: \$200 (delivered)

minimum of a PC running Windows 3.1 or later with a full of RAM and at least 5 MB of hard disk space. To perform OCR, you need at least 8 MB of RAM. The WinFax Scanner was tested on an PC with 20MB RAM, with 8 MB of RAM as an AT internal harddrive

card, and a Lexmark WinPrinter 400 Setup and installation of the WinFax scanner were straightforward, needing only occasional reference to the concise, clearly illustrated manual. The paper guides and extension wire were attached to the scanner, and the

scanner plugged into its external power supply. The scanner connects to your computer via a parallel cable running from the scanner port marked "The PC Parallel Port." A second cable runs from the scanner port



This Delrina ScanPartner Jr looks identical (except for a different label) to the Delrina WinFax Scanner.

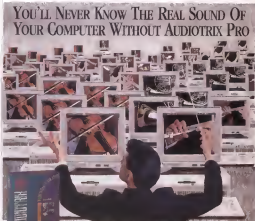
The Computer Paper Test Labs recently tested several of the current crop of multifunction devices (copiers/printers/peripherals that combine the functions of scanners, printers, copiers, and fax), and found them to be efficient and productive tools for the home office. However, they are not cheap: ranging in price from about \$1,400 to \$4,000, and many when they already have some parts of a multifunction device in the form of a facsimile and a printer, which the multifunction device simply duplicates what many can use in a device that can capture an image and store it electronically with the fax, the printer and the PC to provide additional functionality. The Delrina WinFax scanner, which was recently tested in the lab, is an excellent product that can allow a user to complete the multifunction portfolio in a low cost.

Basically, the Delrina WinFax scanner is a Fujitsu-designed scanner loaded with Delrina fax software, and OCR software—Fujitsu Canada also into the scanner, called ScanPartner Jr, as a separate product. The combination of hardware and software allows you to scan documents to be used as a full fax machine for sending scans of documents from the scanner to your faxbook, and allows you to scan in for use as a copier by feeding scanned images from the scanner to the printer.

Because the scanner allows you to input images from the scanner into your PC, you can manipulate the scans with either the separately included image processing software, or third-party programs such as Corel Draw and Adobe Photoshop. As well, scanned documents can be converted to editable word processed text files, using included OCR (Optical Character Recognition) software.

## Get It! The Box

The Delrina WinFax scanner requires a



## THE WORLD'S #1 FULLY EXPANDABLE SOUND BOARD

### What the experts have to say about Audiotech Pro:

#### Expert The First

The Audiotech Pro has been awarded The PC World Best Of The Show Computer Award for the year 1995. The Audiotech Pro has been awarded the Best of the Show Computer Award for the year 1995. The Audiotech Pro has been awarded the Best of the Show Computer Award for the year 1995.

#### Expert's rating of the Audiotech Pro

"The Audiotech Pro is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board."

#### Expert's rating of the Audiotech Pro

"The Audiotech Pro is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board."

#### Expert's rating of the Audiotech Pro

"The Audiotech Pro is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board."

#### Expert's rating of the Audiotech Pro

"The Audiotech Pro is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board."

#### Expert's rating of the Audiotech Pro

"The Audiotech Pro is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board."

#### Expert's rating of the Audiotech Pro

"The Audiotech Pro is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board."

#### Expert's rating of the Audiotech Pro

"The Audiotech Pro is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board."

#### Expert's rating of the Audiotech Pro

"The Audiotech Pro is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board. It is a very impressive sound board and a very impressive sound board."

**AUDIOTECH PRO**  
PROFESSIONAL SOUND BOARD  
A SOUND INVESTMENT





# Express<sup>®</sup> Micro



## 25MHz/1.44MB PC/XT System

- High Byte PC/XT Modem/25MHz 1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive

Assembled \$100... \$1,425  
 25MHz/1.44MB... \$1,245

## PC Hard System \$1,425

- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive

25MHz/1.44MB... \$1,425  
 25MHz/1.44MB... \$1,245  
 25MHz/1.44MB... \$1,245  
 25MHz/1.44MB... \$1,245

## PC Power System \$1,425

- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive

## Pentium Processor

75MHz... \$2,385  
 90MHz... \$2,385  
 100MHz... \$2,385

## Creative Lab Multi Media Value Kit

- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive

# NxTec System

## 25MHz/1.44MB PC/XT System

- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive

25MHz/1.44MB... \$1,195  
 25MHz/1.44MB... \$1,245

## PC Hard System \$1,425

- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive

25MHz/1.44MB... \$1,680  
 25MHz/1.44MB... \$1,830  
 25MHz/1.44MB... \$1,980

## 25MHz/1.44MB PC/XT System

- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive

25MHz/1.44MB... \$1,425

## PC Hard System \$1,425

- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive
- 25MHz/1.44MB Floppy Drive

25MHz/1.44MB... \$2,650  
 25MHz/1.44MB... \$2,800

**Special!** Quantum Fire Ball 100MB EIDE Mode-4 5400rpm 2 year warranty ~~was \$350~~ **\$350**

**Panasonic 486 256K-C D-Road 14.4K \$85 \$210 14.4K \$85 \$210**

**PreView 17" Monitor SVGA 8250dpi NT Low Rad. Digital Control Ultra Thin \$785**

**VLS Mainboard 256k cache 486DX4-100MHz CPU & Fags Free Installation \$295**

Hard Disk Drive	
Quantum	
Fireball 400MB 11ms	\$299
Lightning 750MB 11ms	\$329
Fireball 1000MB 11ms	\$339
Fireball 1000MB 11ms	\$339
SCSI	
Fireball 400MB 11ms	\$299
Lightning 750MB 11ms	\$329
Fireball 1000MB 11ms	\$339
Capella 2.5GB 11ms	\$399
Adaptec 2.5GB 11ms	\$399
Grand Prix 4.5GB 11ms	\$499

Maxtor	
250MB 11ms	\$299
500MB 11ms	\$329
1GB 11ms	\$339
2GB 11ms	\$339
4GB 11ms	\$339
8GB 11ms	\$339
16GB 11ms	\$339
32GB 11ms	\$339
64GB 11ms	\$339
128GB 11ms	\$339

Pentium	
25MHz/1.44MB	\$1,195
33MHz/1.44MB	\$1,245
50MHz/1.44MB	\$1,245
66MHz/1.44MB	\$1,245
80MHz/1.44MB	\$1,245
100MHz/1.44MB	\$1,245
133MHz/1.44MB	\$1,245
166MHz/1.44MB	\$1,245
200MHz/1.44MB	\$1,245
266MHz/1.44MB	\$1,245

Note Book Computer	
NEC - VERSA	
486DX4-100MHz, 16MB, 385T	\$1,195
486DX4-100MHz, 16MB, 385T	\$1,195
486DX4-100MHz, 16MB, 385T	\$1,195
486DX4-100MHz, 16MB, 385T	\$1,195
486DX4-100MHz, 16MB, 385T	\$1,195
486DX4-100MHz, 16MB, 385T	\$1,195
486DX4-100MHz, 16MB, 385T	\$1,195
486DX4-100MHz, 16MB, 385T	\$1,195
486DX4-100MHz, 16MB, 385T	\$1,195

Western Digital	
400MB 11ms	\$299
500MB 11ms	\$329
1GB 11ms	\$339
2GB 11ms	\$339
4GB 11ms	\$339
8GB 11ms	\$339
16GB 11ms	\$339
32GB 11ms	\$339
64GB 11ms	\$339
128GB 11ms	\$339

Maxtor	
250MB 11ms	\$299
500MB 11ms	\$329
1GB 11ms	\$339
2GB 11ms	\$339
4GB 11ms	\$339
8GB 11ms	\$339
16GB 11ms	\$339
32GB 11ms	\$339
64GB 11ms	\$339
128GB 11ms	\$339

Epson	
25MHz/1.44MB	\$1,195
33MHz/1.44MB	\$1,245
50MHz/1.44MB	\$1,245
66MHz/1.44MB	\$1,245
80MHz/1.44MB	\$1,245
100MHz/1.44MB	\$1,245
133MHz/1.44MB	\$1,245
166MHz/1.44MB	\$1,245
200MHz/1.44MB	\$1,245
266MHz/1.44MB	\$1,245

Canon	
25MHz/1.44MB	\$1,195
33MHz/1.44MB	\$1,245
50MHz/1.44MB	\$1,245
66MHz/1.44MB	\$1,245
80MHz/1.44MB	\$1,245
100MHz/1.44MB	\$1,245
133MHz/1.44MB	\$1,245
166MHz/1.44MB	\$1,245
200MHz/1.44MB	\$1,245
266MHz/1.44MB	\$1,245

Video Card	
25MHz/1.44MB	\$1,195
33MHz/1.44MB	\$1,245
50MHz/1.44MB	\$1,245
66MHz/1.44MB	\$1,245
80MHz/1.44MB	\$1,245
100MHz/1.44MB	\$1,245
133MHz/1.44MB	\$1,245
166MHz/1.44MB	\$1,245
200MHz/1.44MB	\$1,245
266MHz/1.44MB	\$1,245

Type Booktop	
25MHz/1.44MB	\$1,195
33MHz/1.44MB	\$1,245
50MHz/1.44MB	\$1,245
66MHz/1.44MB	\$1,245
80MHz/1.44MB	\$1,245
100MHz/1.44MB	\$1,245
133MHz/1.44MB	\$1,245
166MHz/1.44MB	\$1,245
200MHz/1.44MB	\$1,245
266MHz/1.44MB	\$1,245

Hayes	
25MHz/1.44MB	\$1,195
33MHz/1.44MB	\$1,245
50MHz/1.44MB	\$1,245
66MHz/1.44MB	\$1,245
80MHz/1.44MB	\$1,245
100MHz/1.44MB	\$1,245
133MHz/1.44MB	\$1,245
166MHz/1.44MB	\$1,245
200MHz/1.44MB	\$1,245
266MHz/1.44MB	\$1,245

SuperData Technologies	
25MHz/1.44MB	\$1,195
33MHz/1.44MB	\$1,245
50MHz/1.44MB	\$1,245
66MHz/1.44MB	\$1,245
80MHz/1.44MB	\$1,245
100MHz/1.44MB	\$1,245
133MHz/1.44MB	\$1,245
166MHz/1.44MB	\$1,245
200MHz/1.44MB	\$1,245
266MHz/1.44MB	\$1,245







**NOW YOU CAN WALK AWAY WITH A  
BUNDLE WITHOUT DROPPING ONE!**

**A**  
**AMBRA**

**FROM**

**PENTIUM 75MHZ  
PACKAGE WITH  
MONITOR &**

**HP HEWLETT  
PACKARD PRINTER**



**DOS  
WINDOWS  
ENCYCLOPEDIA**

**COLOUR SVGA  
MONITOR**

**QUAD SPEED  
CD ROM  
DRIVE**

**540 MB  
HARD DRIVE**

**8MB RAM**

**INKJET  
PRINTER**

**MONITOR  
INCLUDED**

**\$2599**

06-199520 AMBRA P75

**FUTURE SHOP**  
DISCOUNT SUPERCENTERS

**WE ACCEPT OUT-OF-  
TOWN PHONE ORDERS**

*Call your nearest Future  
Shop for details*

# V-COM offers PC Buyers solid consulting

It usually involves confusion with conflicting information, a myriad of different sales persons, and hours of walking and standing around sales lots and not making any progress at all. But guess what we had to stand when deciding to take the family out for the long-awaited PC purchasing expedition.

For one. There is a virtual maze in the high-tech desert that makes the experience a real pleasure.

## In the business for over 13 years

V-Com Computers, located on the corner of Marine Drive and Kerr in Vancouver, has been in the business of PC sales and service for over 13 years and it's apparent, right away, why they continue to thrive in this ever-changing market.

## Hands on, sit down demonstration systems

The layout of the main showroom is both practical and comfortable. Demonstration models are set up on "hands-on, sit down" modulations so you can try them out. Customers can better assess their particular needs and they have an opportunity to evaluate the exact system that they intend to buy.

A guide through the maze maze of products is located by seasoned professional consultants that listen to the customer's questions and help in putting together the package that best meets their needs.

V-Com's strength is the ability to custom configure each system to the customer's specifications.

That is a real plus as the customer need not go over the budget right away as the system can be easily upgraded later.

There is one station set up just to take you for a little tour through the layout. A great journey around the world via the net.

## The sight and sound room is simply unbelievable

The sight and sound room is simply unbelievable. If you really want to see the potential of today's computers you have got to see that. When I was there, the smart Top Gun was being displayed on 4 monitors of different sizes with a surround like sound blasting from the Proform system driving the

display. This is a real help in showing the difference in monitors and speakers.

Obviously service is something that the company is proud of. Most places have the service department hidden away well out of view of the customer. Not at V-Com. The service area is so plain, very well considered waiting is available for the customer. (A cup of coffee is usually in hand as well.)

## Solid consulting

But when you get right down to it, it's a great place because there is someone there to really talk the time, sit down and provide solid consulting in the needs of the customer.

Definitely, a great place to go when venturing out into the wild, wild world of computer buying.

**V-COM**  
Product  
of  
The  
Month

## THE NEW SATELLITE PRO™ WITH MODULAR CD-ROM.

### Satellite Pro™

The new Satellite Pro™ offers faster access to your multimedia applications with a Quad-Speed CD-ROM.

Now you can retrieve masses of information from large databases and enjoy the latest educational and entertainment software.

A large 12.1" diagonal color display and 16-bit true color support deliver brilliant graphics and extremely realistic images that will leave you in awe. Crisp, clear stereo sound capabilities and interactive video playback will enhance any presentation. The Satellite Pro™ a portable multimedia computer at its highest level. So get going.



In Touch with Tomorrow  
**TOSHIBA**

Toshiba. The World's Best Selling Portable Computers



3104 S.E. Marine Drive Van. B.C.  
Phone: 437-8818/Fax: 437-8881

1220-2nd Ave., Prince George  
Phone: 262-6666/Fax: 562-6101

**V-COM**

We're Listening to You



A new version of MS Visual Basic 4.0 is intended to speed the development of Windows, MS Windows NT and Windows 1.x software. This revision of Visual Basic 4.0 are available: Standard Edition and Enterprise edition, aimed at meeting the needs of different levels of software developer. All versions offer full OLE technology support, improved data access, an object and visual development environment and seamless integration from Visual Basic 3.0-based applications.

The MS FORTRAN PowerStation 4.0 for Windows 95 is intended to ease the migration of legacy FORTRAN code from mainframe, minicomputers and UNIX workstations to local-based PCs running Windows 95, according to Microsoft. FORTRAN90-based applications

As well, Microsoft announced a standard of new programming tools, currently under development for developers of Windows 3.1, Windows 95 and Windows NT. Visual SourceSafe 4.0, an enhanced central configuration management system for software development, will be available

OLE System is an online marketplace for OLE servers and OLE Controls for the

© 2004 Blackwell Publishing Ltd  
Journal of Internal Medicine 255: 103–112

## General Ledger

[illegible]

Code	Item	Unit	Price
001	100% Cotton T-shirt (White)	100	100
002	100% Cotton T-shirt (Blue)	100	100
003	100% Cotton T-shirt (Black)	100	100
004	100% Cotton T-shirt (Red)	100	100
005	100% Cotton T-shirt (Green)	100	100
006	100% Cotton T-shirt (Yellow)	100	100
007	100% Cotton T-shirt (Purple)	100	100
008	100% Cotton T-shirt (Pink)	100	100
009	100% Cotton T-shirt (Grey)	100	100
010	100% Cotton T-shirt (Brown)	100	100
011	100% Cotton T-shirt (Gold)	100	100
012	100% Cotton T-shirt (Silver)	100	100
013	100% Cotton T-shirt (Copper)	100	100
014	100% Cotton T-shirt (Zinc)	100	100
015	100% Cotton T-shirt (Aluminum)	100	100
016	100% Cotton T-shirt (Steel)	100	100
017	100% Cotton T-shirt (Titanium)	100	100
018	100% Cotton T-shirt (Carbon Fiber)	100	100
019	100% Cotton T-shirt (Kevlar)	100	100
020	100% Cotton T-shirt (Fiberglass)	100	100
021	100% Cotton T-shirt (Ceramic)	100	100
022	100% Cotton T-shirt (Glass)	100	100
023	100% Cotton T-shirt (Plastic)	100	100
024	100% Cotton T-shirt (Rubber)	100	100
025	100% Cotton T-shirt (Leather)	100	100
026	100% Cotton T-shirt (Suede)	100	100
027	100% Cotton T-shirt (Silk)	100	100
028	100% Cotton T-shirt (Wool)	100	100
029	100% Cotton T-shirt (Linen)	100	100
030	100% Cotton T-shirt (Cotton Blend)	100	100
031	100% Cotton T-shirt (Polyester Blend)	100	100
032	100% Cotton T-shirt (Nylon Blend)	100	100
033	100% Cotton T-shirt (Spandex Blend)	100	100
034	100% Cotton T-shirt (Cotton Knit)	100	100
035	100% Cotton T-shirt (Cotton Jersey)	100	100
036	100% Cotton T-shirt (Cotton Rib)	100	100
037	100% Cotton T-shirt (Cotton Pique)	100	100
038	100% Cotton T-shirt (Cotton Twill)	100	100
039	100% Cotton T-shirt (Cotton Denim)	100	100
040	100% Cotton T-shirt (Cotton Canvas)	100	100
041	100% Cotton T-shirt (Cotton Corduroy)	100	100
042	100% Cotton T-shirt (Cotton Sateen)	100	100
043	100% Cotton T-shirt (Cotton Satin)	100	100
044	100% Cotton T-shirt (Cotton Tulle)	100	100
045	100% Cotton T-shirt (Cotton Lace)	100	100
046	100% Cotton T-shirt (Cotton Mesh)	100	100
047	100% Cotton T-shirt (Cotton Net)	100	100
048	100% Cotton T-shirt (Cotton Gauze)	100	100
049	100% Cotton T-shirt (Cotton Bandage)	100	100
050	100% Cotton T-shirt (Cotton Tape)	100	100
051	100% Cotton T-shirt (Cotton String)	100	100
052	100% Cotton T-shirt (Cotton Cord)	100	100
053	100% Cotton T-shirt (Cotton Rope)	100	100
054	100% Cotton T-shirt (Cotton Twine)	100	100
055	100% Cotton T-shirt (Cotton Yarn)	100	100
056	100% Cotton T-shirt (Cotton Thread)	100	100
057	100% Cotton T-shirt (Cotton Sewing Thread)	100	100
058	100% Cotton T-shirt (Cotton Quilting Thread)	100	100
059	100% Cotton T-shirt (Cotton Embroidery Thread)	100	100
060	100% Cotton T-shirt (Cotton Knitting Thread)	100	100
061	100% Cotton T-shirt (Cotton Crochet Thread)	100	100
062	100% Cotton T-shirt (Cotton Weaving Thread)	100	100
063	100% Cotton T-shirt (Cotton Spinning Thread)	100	100
064	100% Cotton T-shirt (Cotton Dyeing Thread)	100	100
065	100% Cotton T-shirt (Cotton Finishing Thread)	100	100
066	100% Cotton T-shirt (Cotton Mending Thread)	100	100
067	100% Cotton T-shirt (Cotton Patching Thread)	100	100
068	100% Cotton T-shirt (Cotton Repairing Thread)	100	100
069	100% Cotton T-shirt (Cotton Reinforcing Thread)	100	100
070	100% Cotton T-shirt (Cotton Binding Thread)	100	100
071	100% Cotton T-shirt (Cotton Sewing Machine Thread)	100	100
072	100% Cotton T-shirt (Cotton Hand Sewing Thread)	100	100
073	100% Cotton T-shirt (Cotton Needle Thread)	100	100
074	100% Cotton T-shirt (Cotton Sewing Needle Thread)	100	100
075	100% Cotton T-shirt (Cotton Sewing Needle Thread)	100	100
076	100% Cotton T-shirt (Cotton Sewing Needle Thread)	100	100
077	100% Cotton T-shirt (Cotton Sewing Needle Thread)	100	100
078	100% Cotton T-shirt (Cotton Sewing Needle Thread)	100	100
079	100% Cotton T-shirt (Cotton Sewing Needle Thread)	100	

Machine	Relative	Quality	Normalized	Complexity	Size	Efficiency
Machine 1	1.0	1.0	1.0	1.0	1.0	1.0
Machine 2	0.8	0.9	0.9	0.8	0.9	0.8
Machine 3	0.7	0.8	0.8	0.7	0.8	0.7
Machine 4	0.6	0.7	0.7	0.6	0.7	0.6
Machine 5	0.5	0.6	0.6	0.5	0.6	0.5
Machine 6	0.4	0.5	0.5	0.4	0.5	0.4
Machine 7	0.3	0.4	0.4	0.3	0.4	0.3
Machine 8	0.2	0.3	0.3	0.2	0.3	0.2
Machine 9	0.1	0.2	0.2	0.1	0.2	0.1
Machine 10	0.0	0.1	0.1	0.0	0.1	0.0

Call 1-800-4-A-RENT, Fax 1-800-4-A-RENT, or visit our website at [www.4arent.com](http://www.4arent.com).  
 4A Rent is a leading national real estate company.  
 4A Rent is a leading national real estate company.  
 4A Rent is a leading national real estate company.  
 4A Rent is a leading national real estate company.

call for our in house custom electronics design, LabView programming, data logging etc.

allows digital developers conveniently launched by ObjectWeb in cooperation with Microsoft. At launch the online offerings include over 250 reusable OLE Controls from Microsoft and any other companies. Steve Ballmer, executive vice president of sales and support at Microsoft, noted "The global availability of certified, reusable components through OLE makes development that the software industry has finally achieved the long elusive goal of installing software from 200MBs, language-independent languages. The implications for reducing both widely diverse concepts in corporate re-engineering and rapid application development are incredible."

#### Microsoft Developer Network, Is The Next Level

Microsoft's popular Developer Network has announced Level 3, targeted at IBM Independent software vendors and others who are developing software for the Microsoft Windows as integrated

family of many software. "With Level 3, we're extending the Developer Network model to client server development using Microsoft VisualC++," according to Neil Sengupta, director and developer tools product manager for Microsoft Canada. "The idea is to put in the most up-to-date technology into the hands of Microsoft's best Office-based application developers."

#### What, No Metropolitan?

With the release of all three new versions of developer tools, and the extension of

the Developer Network, Microsoft begins to quickly expand the appeal of Windows 3.5 with a flood of exciting new third party software products. Third party software developers racing to market with hundreds of new 32-bit applications for Windows 3.5 may find that they quickly cross a new nine billion dollar software market for themselves. For those seeking an acquaintance with these tools Microsoft is offering a whole new universe of business opportunities for the software development industry. □

Contact: Microsoft Canada (905-709-0000)

Microsoft Developer Network (Developer's Only)  
<http://www.microsoft.com/devnet> and The Microsoft Network, or email to: [DevNet@Microsoft.com](mailto:DevNet@Microsoft.com) with Subject: DEVNET or for newsletter only (don't subscribe the newsletter)  
 Developer's Only  
<http://www.microsoft.com/devnet>  
 Microsoft Corp. 408-774-3400

## SCANNERS

### Imp01/2

Continued from page 28

it has its own — like not making room space on a table but what it can be used to show more of the image.

My problem is that the first window's border contains some noise from the table that with some of the editing tools, tools which are not included in a specific image. Many of the buttons on the toolbar (as you perhaps know) function on a particular position of the image. However, there is no button to let you make such a selection quickly.

One area where Imp01/2 excels is color correction. Anyone who has scanned images has probably noticed that once you reduce an image from 24-bit color (say, by saving it as a GIF), you can not perform many special effects on it. Imp01/2 offers several options when reducing an image from true color to 256 colors. When saving as the other options, each pixel is assigned a 24-bit color value but the total number of colors is still 256 or less. This allows special effects to be applied to an image which is not in fact a true color image. The results of the special effects are limited by the low number of colors, but at least they can now be applied.

Imp01/2 also employs some sophisticated methods when enlarging an image. If the image is in 24-bit grayscale or true color the original pixels can be "interpolated" rather than just a duplicate of the adjacent pixel. This can help decrease the amount of "jaggedness" when you enlarge an image. For my own use, I have found that these two features alone are worth the price I paid for Imp01/2.

Overall, I am quite happy with Imp01/2. The only feature I really miss is the ability to "simulate" low partial scan into a single white so I can't get rid of HAMAs yet. If you are looking for a good image editing program, but don't have the 234555 for C or P or S, take a look at Imp01/2. GI

Copyright Imp01/2 is developed by Computer Systems GmbH. Germany available now

## Building the power...

### Reliability...

...an essential requirement for the new microsystem in addition to speed and value, the Datam 3™ now combines real affordability with innovative new features that make it the most powerful microsystem in its class. To start, you can choose the processor you want - from extremely fast (48002/60MHz) to blinding fast (Pentium® 133MHz).

### Upgradability...

Every microsystem in plug and play compliant, comes equipped with PCI Local Bus graphics, voice hardware, and is pre-loaded with Windows 95. Optional CD-ROM and other PCI add-ons are also available to tailor your application needs.

### Dealers Welcome

Call 1-800-665-1838



1-800-665-1838

6001 1011 Avenue, East  
 95040-2000, U.S.A.  
 TEL: (949) 370-4888  
 FAX: (949) 370-7588

Datam 3 is a trademark of the Datam 3 Group. The Pentium is a registered trademark of Intel Corp. Windows is a registered trademark of Microsoft Corp.

### Compatibility...

Best of all, the Datam 3™ is available in several different platforms to accommodate every working environment. The new Datam 3™ Microsystem will give you a whole new way to think about computing for your home or business.

**Datam 3™**  
 MicroSystem







Start

*with the right monitor*



Introducing the all new **Computer**  
17" Windows 95™ Plug N Play Monitor

- 0.28mm dot pitch
- 1280 x 1024 resolution
- On-screen display
- MSX II compliance WIN
- 90" Plug N Play



Start

*with a WIN 95™*  
printer and a brand new Image Center™,  
both from **brother**



**HL-645M**  
• 600dpi/600 dpi resolution  
• 8ppm/10ppm/12ppm  
• 10ppm/10ppm/10ppm  
• 10ppm/10ppm/10ppm



**Image Center**  
• 600dpi/600 dpi resolution  
• 10ppm/10ppm/10ppm  
• 10ppm/10ppm/10ppm

- We also carry Brother HL-645M, ASPPM, TNC, Mac Printer
- Please call STD Computer (Western Canada) Ltd. for your nearest dealer today!

**STD**  
Computer

STD Computer  
(Western Canada) Ltd.  
457-2120 Avenue Road  
Edmonton, Alberta T6C 1T4  
Tel: (403) 278-1900  
Fax: (403) 278-1941

STD-Peter Street  
Edmonton, AB T6C 2P9  
Tel: (403) 444-4800  
Fax: (403) 445-5333

47 - 1751 26th Ave. NE  
Edmonton, AB T6C 3P6  
Tel: (403) 558-0275  
Fax: (403) 558-0568

## DIGITAL VIDEO

[illegible]

The EASCE Library is a multi-user organizational utility with a simple, easy way to use features. When you click on the MILEAGE dialogue box, it organizes files through chronological, numerical and file statistics, even offering a means to view the notes. The TRANSMISSION dialogue box reveals a cluster of 20 transactions, while the IMPACTS dialogue box has 34 effects. The MOVEMENT box can organize any one of the above options into rows and columns. The open architecture design allows the easy addition of other

Any other an effort, transition or media clip is selected, it can be dragged to the Composition Window for placement in the time line.

When a media clip is double-clicked, it instantly summons the **MOVIE Player**, which has the typical window options such as **marking in** and **out points**, **seeking**, **markers** (which you use to snap to other markers along a timeline and roll way in quickly), the ability to **gig and shuffle**, and **close** (which shuts it).

[illegible]

The **RAISON** Composition window works along a basic tabular graphical timeline (which is skinnable), into which clips of audio, video, graphics, text and animation can be dragged and dropped. It has an infinite number of video and audio tracks as well as tracks for the placement of effects and transitions. Its menu of dialogue boxes has an **MPX3D** browser, including multiple undo, enabling the user to change any complicated layered effects and edit. A **MPX3D** text editor, editor, chart, spreadsheet, video, and

his son, *APR 1997*, is *WINTER* from *CRIMINAL MINDS* in  
which he plays a man who is a *WINTER* from *CRIMINAL MINDS*

[illegible][illegible]

To a degree, this program is scaled down and focused strictly on editing. There is no content writer or image editor, respectively.

Copyright © 2004 John Wiley & Sons, Ltd.



**NORTHWEST DIGITAL**  
NWD Systems (Vancouver) Inc.

#150-13151 Vanier Place  
Richmond, B.C. V6V 2J2  
Tel: (604) 270-7432/7261  
Fax: (604) 270-4127  
Internet: modrich@mk.mjs.com

### *"Understanding Technology Through Education"*

Activity Title (3 hours per activity)	Activity Dates
Application Development using Microsoft Access 3.0 (3 days)	November 14 November 15
Implementing a Database Design on Microsoft SQL Server 4.0 for Windows NT (3 days)	October 26
Implementing Microsoft Mail 3.0 (3 days)	October 18 November 08
Installing and Configuring Microsoft Windows NT 3.0 (3 days)	November 22
Interconnecting with TCP/IP using Microsoft Windows NT 3.0 (3 days)	December 11
Performance Tuning and Optimization of Microsoft SQL Server 4.0 on Windows NT (3 days)	November 27
Programming in Microsoft Visual Basic 3.0 (3 days)	October 26 November 17
Programming with Microsoft Access 3.0 (3 days)	November 28
Supporting Microsoft Windows NT 3.01 (3 days)	November 4 December 4
Supporting Microsoft Windows NT Server 3.51 (3 days)	October 26 November 28 December 11
Supporting Microsoft Systems Management Server (3 days)	November 4 December 4
Supporting Microsoft Windows 95 (3 days)	November 4 December 4
System Administration for Microsoft SQL Server on Microsoft Windows NT (3 days)	December 18

© 2000 Blackwell Science Ltd *Journal of Internal Medicine* 247: 395–401



Call NWD's Education Services Hotline (604) 270-7432/7726

## Interpreting the Numbers

1000

[illegible]

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

If you have the time, a VGA screen resolution is 640x480 and SVGA is 800x600. There's 120x40 video image is taken up simply a third or half of the computer screen. 640x480 is definitely less than a third of the screen and 800x600 is what you call postage stamp size. But remember, at 120x40 resolution, an unmanaged video card would definitely not take up 1/3 of the screen.

### Personal Organization and Image Quality

The pun is a pretty cheap little gag, so the bottom line is that any dropped frames are noticeable. The ideal is zero dropped frames. The particular argument that is acceptable is according to you really need to judge for yourself, but when you're dropping that or six frames per second, that's really noticeable. It's better to reduce other aspects of the image quality — by reducing the frame size or dropping the number of colors (which is a tragedy).

—Alan W. Schwartzman, 2001



# OUR SYSTEM CONNECTS YOUR LOCAL AREA NETWORK TO THE WORLD WITH NO LONG DISTANCE CHARGES!

## INTERNET GATEWAY

### INTRODUCING THE COMPUCON INTERNET GATEWAY



With the Compucon Internet Gateway in the LAN of your office, all workstations will be able to communicate using a single outlet. The LAN is well as with other computers all over the world at the same time. In local call rates via a single telephone connection to an Internet Gateway Provider.

Your company can also access business information in the Internet world from any workstation. Compucon has designed a series of network communication systems to enhance the efficiency in your office. Contact your Compucon dealer or our office today for a free consultation.

### COMPUCON INTERNET GATEWAY WILL PROVIDE:

- Simultaneous multi-line e-mail to the world with single telephone connection (Optional upgrade to Compucon ISDN Gateway)
- Savings on long-distance telephone communication
- Internet access to a limitless world of information

**COMPUCON**  
INTERNET GATEWAY SYSTEM  
DISTRIBUTED BY: HASTECH COMPUTER LTD.

**BRITISH COLUMBIA**  
180 - 12750 Bayview Place,  
Burnaby BC V3N 2J8  
Tel: (604) 278-1666 • Fax: (604) 278-1007  
info@compucon.com

**ALBERTA**  
Unit 11, 3020 - 29th Street SE,  
Calgary Alberta T2C 1G1  
Tel: (403) 260-0000 • Fax: (403) 270-0000  
info@compucon.com

**DON'T WAIT ANY LONGER.**

**INSTALL A COMPUCON INTERNET GATEWAY AND LINK YOUR ENTIRE OFFICE TO THE WORLD.**

### DIGITAL VIDEO

#### Making Movies on Your PC

Continued from page 48

that seems to be standard on most applications. The tutorials are straightforward and can help you when you get stuck on more complicated functions. It took four days to install and connect with an extra day to install Windows for Windows. Unfortunately, Encore does not support QuickTime for Windows.

The User's Guide is well written and very helpful. One odd thing noticed on SAATCHI PRO's system requirements of 34 MB of RAM to operate My In-Motion had no problem installing, running or exporting and never hung up or seemed to run slowly. The final word on SAATCHI PRO 2.0 is that it's as easy to use and powerful editing program which costs a few cents more than to be truly serious.

### Premiere Version 4.0

From: Apple Systems

Price: \$299.00

#### System Requirements:

- 386 or higher
- Windows 3.0 or higher
- 20MB or higher
- 40 MB of RAM
- 100 MB of hard drive space
- 16-bit color display adapter (24 colors)

#### notes:

- 100 MB extra

**Premiere Version 4.0** by Apple Systems is a professional digital video program with the biggest and best reputation. As easy as it can seem to be intimidating, given its wide array of capabilities and functions. The interface is clean, composed of a few icons related to certain tasks and just above them. The basic elements of windows is similar to those of the other software windows which seems to be the opening level for film, the Compositing Window where the editing begins, along the timeline (timeliner) is short, and a Clip Window, which serves as the viewer.

#### Editing and Viewing

In the Project Window you can choose to display clips with thumbnails, with the information and turn the clip change thumbnail size can by some percentage, left, and have the choice to show or hide icons. You can even collect clips and

Continued on page 49

**COMPUCON™**

**QUALITY COMPUCON™ PRODUCTS AVAILABLE AT:**

#### ■ HASTECH

CENTRAL COMPUTER SERVICES  
TEL: (505) 244-4540  
FAX: (505) 244-2570

#### ■ BRIDGE OFFICE SYSTEMS INC.

TEL: (800) 732-4444  
FAX: (800) 732-4447

#### ■ GUN PAPER COMPUTER SERVICES

TEL: (800) 686-0300  
FAX: (800) 686-0301

#### ■ 44 AND HIGH COMPUTER LTD.

TEL: (504) 881-8178  
FAX: (504) 881-8179

#### ■ NETWORK INFORMATION LTD.

TEL: (504) 324-8780  
FAX: (504) 324-8781

#### ■ H. HUNTER

2401 CAMDEN AVE. CAMDEN, OHIO  
TEL: (514) 424-1100  
FAX: (514) 424-1100

#### ■ ECOMPUTER

BRIDGE COMPUTER SERVICES  
TEL: (505) 244-4540  
FAX: (505) 244-2570

#### ■ DCL

BRIDGE COMPUTER SERVICES  
TEL: (505) 244-4540  
FAX: (505) 244-2570

#### ■ BRIDGE COMPUTER SERVICES

TEL: (505) 244-4540  
FAX: (505) 244-2570

#### ■ BRIDGE COMPUTER SERVICES INC.

TEL: (505) 244-4540  
FAX: (505) 244-2570

#### ■ COMPUKEY

BRIDGE COMPUTER SERVICES  
TEL: (505) 244-4540  
FAX: (505) 244-2570

#### ■ BRIDGE LTD.

CREATIVE INFORMATION  
TEL: (505) 244-4540  
FAX: (505) 244-2570

#### ■ SPACED

PRO SHOP  
TEL: (800) 732-4444  
FAX: (800) 732-4447

#### ■ HASTECH

BRIDGE OFFICE SYSTEMS  
TEL: (800) 732-4444  
FAX: (800) 732-4447

#### ■ BRIDGE OFFICE SYSTEMS LTD.

TEL: (800) 732-4444  
FAX: (800) 732-4447

# COREL DRAW! 6



Corel PHOTO-PAIN! 6.0  
Add to 32-bit graphics  
for fast and efficient  
graphic modification



Corel PRESENTS! 4.0 Create dynamic presentations with  
powerful charting, mapping and navigation tools



CorelDRAW! 6.0 Multiple document functions, increased speed, power  
capabilities



CorelDRAW! 3D 4.0 Powerful 3D rendering and modeling  
software with an integrated interface

The Best in 32-Bit Graphics!

Corel PHOTO-PAIN! 6.0  
Drawing tools allow  
natural media brush  
styles, colorized film strip

**CorelDRAW! 6 is here!!!** With awesome speed, power and accuracy plus hundreds of enhancements, CorelDRAW! 6 is the most robust graphics software suite available. CorelDRAW! 6 offers fully-featured software applications for illustration, photo-editing and bitmap creation, business and multimedia presentations, 3D rendering and animation. Also includes eight great utilities and incredible libraries.



#### Includes:

- CorelDRAW! 6
- Corel PHOTO-PAIN! 6
- CorelDRAW! 3D 4
- Corel MOTION 3D 6
- Corel PRESENTS! 4

#### Plus:

- 15,000 clipart images and symbols
- 1,000 photos
- 1,000 "TrueType" and Type 1 fonts
- Over 750 3D models



Microsoft Windows 95  
Required for Windows 95  
operation. Windows 95  
must be installed on the  
hard disk.

**FUTURE SHOP**  
DISCOUNT SUPERCENTERS

Visit the location nearest you!

Special Price  
\$689<sup>99</sup>  
32-bit version  
Complete software & manuals  
on 3 CD-ROMs  
Includes presentation &  
drawing tools  
15,000 clipart images  
& symbols  
1,000 photos  
1,000 "TrueType" and  
Type 1 fonts  
Over 750 3D models



**COREL**  
CORPORATION  
1111 17th Avenue SW  
Richmond, BC V6X 1A6  
Canada

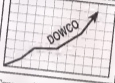
Internet Daily News

## Dowco David Winning Dial Up Battle

Quality Service A Large Part of This Success Story

Internet Page Presentation  
Included in Dial Up Service

### MARKET SHARE



Community Now Knows Call  
David For Positive Results

### Things To Do Today

- Internet also means BUSINESS
- Go Global - Market Worldwide
- Reach 39 Million Consumers
- Get Volume Sales Online
- Profit from Technology
- Save on Long Distance
- E-Mail & Fax Savings
- Efficient & Cost Effective
- Save Time - Do More With Less
- Call Dowco, our Dowco 524-2736
- Discover Dowco Dial Up Service
- Relax & Enjoy the Internet!
- Relax & Enjoy the Good Life!

# DOWCO

"Your Solid Web Connection,"  
Now 25 years of Solid Service

Tune In To  
"The Internet Made Easy"  
Show On



With Jonathan Ross - Saturdays  
11:00 AM until Noon

Unlimited  
Dial Up Use

**\$19.<sup>95</sup>**  
Per Month

Dial Up  
Accounts  
From

**\$9.<sup>95</sup>**  
Per Month

Unlimited Dial  
Up Use • Plus  
Web Page

**\$29.<sup>95</sup>**  
Per Month

Call (604) 524-2736 or (604) 937-5505 Today & Plug In to dowco.com  
View our Web site at <http://www.dowco.com>





# Build It Or Buy It?

## The Method and Madness of Building Your Own Computer

BY ROSEMARCOLO

### Part I: What and Wherefore

When it was first suggested that I build my own computer and then write about it I was dreadfully happy because making my own computer has been a dream of mine since I was a child. After all, prices have dropped to ultimately affordable levels where individual components upgrading has become almost commonplace. The writing just makes slightly more sense, though because that's the basis of my past results.

I usually know several people who have either built their own computers from scratch or upgraded their systems so often they might as well have. The "builders" share two general advantages: 1) complete control over what goes into the system and 2) knowing the ins and outs of how the components work — most direct to an invaluable sense of what future upgrades and trouble-shooting. The "upgraders" agree but add the more practical claim that the slow replacement of individual parts is increasingly more feasible since you only have to come up with a portion of the money involved at any one time.

Most people who have considered building their own systems are however concerned about losing out on these systems while machines and tech support, that that can be easily replaced by the fact that virtually all the components have their own warranty and often offer better and more knowledgeable tech support.

The second biggest concern — cost — is also a less happy concern, anybody who thinks they're going to save money by building their own computer can't help it, in fact,

quite the opposite is true. Building a computer from individual parts will actually cost a premium because there are no opportunities for retailers to offset the cost of some components by making up the others (e.g., a system may have a good video card but a cheap motherboard to keep the price down).

Before you start, there is one absolute golden rule to keep in mind: establish a good relationship with the store where you buy all or many of your components (because you're going to have a lot of questions during and after your purchase) and a friendly and helpful expert will be of more value than any individual component.

If you intend to enter a good deal of time and attention from many angles while you're buying, but that can detract to start with, once they've got hold of you, they'll usually take care of you just as much. I usually know three or four people who are referred to as a "store" (think of the service as a component) of your personal as important as any other. If you don't, you'll come with you too — don't stop for your list and please do provide.

Now that we've got that behind us and we've established our best friend who'll save

#### Basic Essentials

- Motherboard
- RAM
- HD and floppy
- Video card
- Hard drive
- Floppy drive



RAM—These RAM modules are the most "3.3v" variety, although they look like the 5.0v 30-pin RAMs. The assembly has one 50-pin module installed.

- Case (plus power supply, usually included with case)
- Keyboard and mouse

#### Desirable Options

- Soundcard
- CD-ROM drive
- Touchscreen

#### What You Need and What to Look For

**1) The Mother (or Main) Board and CPU:** After approx. \$40 — \$300 to \$400. Pentium — \$100 to \$1,000 (depending on make and CPU speed).

This is the heart of any computer system, and where you should start because the motherboard you choose will pretty much cover just about everything else in your system — to the extent of determining what else you can and cannot buy. It's also the most baffling thing, because there are so many choices. However, if you've got a friend in the store, you will get right off the back once shopping.

Though they can be purchased separately, it's more usual to buy a motherboard already equipped with a chip (CPU), and retain CPU to go on the motherboard is generally the first thing most people look at.

Nowadays, a mother board with a 333, 386, 486 CPU is the absolute minimum you should even consider. While current prices between \$400 and \$480 (depending on make and quality), you can still get up with a capable computer at a very reasonable price.

However, many level Pentium equipped motherboards (many are 40 and 75 Mhz) built (Mhz) could cost only about \$400 more and will ultimately save you better for several years.

The first Pentium levels come from the fact that the chip itself is 44-pin, which essentially means it's 44-bit, to the motherboard through 64 connections simultaneously. The 44-bit levels of CPUs are all limited to 33. This, in turn, means that — theoretically, at least — you get faster and more efficient communication between the chip and the board.

Accordingly, and actually of great importance is that Pentium motherboards (which is called a PC) bus. This is the common railings system between many of the cards you're going to be installing and the CPU — all

of which are attached to the 44-bit bridge. For all the talk on a Pentium motherboard will be PC) as you have to make sure there are enough to accommodate all the cards that will attach (and in some cases the video card). A sound card, for example, already operates fast enough for any computer to a most benefit from a PCI interface. You'll wish that into a standard ISA (Industry Standard Architecture) or ISA (Industry Standard Architecture) slot — it is a cost issue between the two for actual users, so don't worry about which you motherboard has. Your video card, in the other hand, needs all the help it can get on that's a definite PCI buy

**Before you start, there is one absolute golden rule to keep in mind: establish a good relationship with the store where you buy your components**

for Pentium based machines.

In the end, a Pentium based motherboard combined with PCI cards will allow the user to add and remove as many as maximum speed and efficiency is desired. It's important to note that the PCI bus incorporates a new development called "plug & play" which means you should be able to simply slide new cards into these slots and the CPU will be able to communicate properly with what they're on, and then do things up accordingly. This has proven to work in some degree but not all cases, without problems. Personally, Windows 3.1 has something similar and equally dirty built-in in the local of some Pentium users.

Jumping ahead slightly, another new feature that Pentium users will have access to is built in I/O although throughout the short history of the PC, there have never been a few manufacturers that choose to design all-in-one motherboards incorporating I/O, video and sometimes even a fax modem. I/O simply means the Input/Output and a usually accomplished by installing an I/O card into one of the motherboard slots. The I/O card contains connectors for your hard and floppy disk drives as well as the ports through which you print, about joystick, and many other items not built directly into the motherboard will talk to the computer. The-board manufacturers require that you put these on I/O card separately.

Continued on page 42



presents

# SmarttNet

- Multiple T1
- Ubiquity

INTRODUCING 2 HOURS OF FREE CLASSROOM TRAINING ON THE INTERNET  
ONLY \$20 / mth (UNLIMITED USAGE TIME)

no set up charge

It is the time to make it  
**EASY@SMARTT.COM**  
CALL NOW (604)473 9700

**WE ARE THINKING AHEAD**



*Advanced Communications  
Network Partner*



memory chips should be avoided, because saving chips of different speeds can lead to timing errors — can you guess what? — the idea is the faster available right now and will be worth the extra few dollars per meg.

#### Q) The V/LD (Input/Output) Card

Price range: a bargain at \$15-25 for standard I/O. \$40-60 for EISA or PCI.

This is a relatively straightforward purchase that may result in be considered for Pentium. Pentium can built in I/O slots) but will be as:

absolute must for this.

The V/LD card will work at just as an output where you can hook up your floppy disk drive, hard disk drive and any other internal add-on like a tape backup. It also provides the parallel and serial ports at the back of the computer for your mouse, joystick, (joystick, etc.). This is one of the cards that directly benefits from a faster interface between your disk drive and its controller. Since your disk drive need to communicate with the CPU as quickly as possible. This means all you should look for a V/LD type called dual-channel (24 pins), which Pentium

people at home will want a PCI I/O card — if their mother board doesn't have the I/O built in.

Just remember that your disk drives, tape backup, etc. have to be wired for the type of I/O you buy (e.g., if you have SCSI I/O you have to get a SCSI or SCSI hard drive).

#### Q) The Video Card (Video Accelerator)

Price range: < \$100 to \$250+

As the price range indicates, there are many ways to go when it comes to a video card —

too many, in fact. The main reason here is speed because it takes a lot of computing resources to generate those millions of colors and move them around in video and animation.

Again, though there are standard ISA video accelerators, you should only consider V/LD or PCI because this truly needs the bus. As even better news comes from the amount of video RAM that's on the card and (it's the reason that's largely responsible for much of the wide range in prices.

First, video cards have their own local chips, just like those on your mother board. And also like on your mother board, the more the better. In a word: Only a few years ago, 512 kilobytes of video RAM was considered pretty hot, even with the sophisticated video and animation being all of CD ROMs and the more games that just isn't enough in size and graphics all that information sensibly. One megabyte of video RAM is now the standard and will sure mean people will enough. Two MB is of course better and serious consumers will look for less. There's a point though at which you won't see any difference — depending on what you're planning on doing with your machine — so don't automatically shell out for the maximum amount of video RAM unless your intended application can use it.

The next thing about a good-quality video card is that it will have options in it for adding more RAM at a later point. The average cost for a megabyte of video RAM is about \$80 which is affordable if not a bargain. Intel's good-quality cards will come with a built-in controller and options for one more. Upper range cards will come with 2 MB and options for two more. Discuss this with your dealer.

#### Q) The Hard Disk Drive

Price range: a nice Gigabyte still after can now be had for about \$185.

There's all you really need to learn about hard drives. In everyone's delight, the capacity just gets bigger while the price you get makes it. Gigabyte equals one thousand megabytes (which equals one thousand bytes) — and a few years ago a byte was — but their rapidly becoming the standard storage capacity for many systems because modern software quite simply demands lots and lots of space. Some people are even finding it necessary to install a second hard drive — a relatively straightforward operation as long as you have the room for "The Case" below.

Make sure you get a larger diameter and CMTS interface with your hard disk. You need there to set up the drive and tell the CPU what kind software it is.

#### Q) The Floppy Disk Drive

Price Range: \$40 - \$55

Again, not much to tell, but we are talking about the 5 1/4-inch, 1.44 MB capacity models here. These old 5 1/4-inch drives can still be found for less than \$20 but you're unlikely to ever find one. Even the 5 1/4-inch drives are called 3 1/2-inch and less these days. Though they it barely the mounting from CD ROM hard disk were and extracting files from your system. If you're planning on a lot of disk copying, you should consider installing two (see "The Case" below).

## SCEPTRE

# BEST OVERALL BUSINESS MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR



15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

#### Network Hardware

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR



The Sceptre monitor provides you with a broad range of features to help you work more efficiently and effectively. The Sceptre monitor is designed to be used with a variety of systems and is available in a range of sizes and configurations.

For more information on the Sceptre monitor, please contact your local Sceptre distributor or visit our website at [www.sceptre.com](http://www.sceptre.com). The Sceptre monitor is available in a range of sizes and configurations.

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)

Monitor.com is available at [www.monitor.com](http://www.monitor.com)



## Quantum Technologies

Building Custom Solutions for Group Customers

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

15" MONITOR  
15" MONITOR  
15" MONITOR

Greater Vancouver  
Fax Requests  
Canada & USA

(800) 244-5852  
(800) 244-5853  
(800) 828-8181





## IS YOUR LASERJET PRINTER TIRED?

- ◆ Does it groan, squeak, whine or even clunk?
- ◆ Is the print quality 100% of what it should be?
- ◆ Does the paper ever jam or slip?
- ◆ Is your printer dirty?



## WE MAKE OLD PRINTERS FEEL NEW!

Your Laser Printer was designed to last a long time (most duty cycles are at least 350,000 pages), but it requires some TLC along the way. Minor parts will wear due to use, heat and even time. Those seemingly insignificant parts can cost you significant dollars in repairs and down time. Do yourself and your printer a favour by rejuvenating it with our **Preventative Maintenance & Cleaning program! Quality Workmanship Performed with Pride and Integrity by Factory Trained Technicians!**

## 4 GREAT NEW PROGRAMS

*Available in Depot Service Available!*

- |                       |                        |
|-----------------------|------------------------|
| ◆ LIGHT PM & CLEANING | ◆ TOTAL PM <i>plus</i> |
| ◆ TOTAL PM & CLEANING | ◆ TOTAL PM & WARRANTY  |

With a Light PM & Cleaning starting at only \$99.00 (depot service) including over \$50.00 in free parts and a Total PM & Cleaning starting at only \$179.00 (depot service) including over \$100.00 in free parts, it's a service that you can't afford not to have. Call 685-2737 for complete details on this and our other services.

## SAVE ON LASER

Service & Supplies for  
HP, IBM, & Xerox

55 East 5th Ave., Vancouver, BC

## WE GUARANTEE ALL OUR SERVICES

Call 685-2737 or Fax 874-2737

For Complete Details!

## FEATURE



PCI bus—The white connector on the PCI card. (Source: Intel. The circuit board is courtesy Intel 10-bit EISA card.)

drive features really fit some computers with an internal and well. However, manual another great feature is that all the features are present on the factory (something you'll appreciate later).

Free steps at 72-pin RAM. RAM's EISA

UMC 330, 768 KQ card provided by Code II Computer to Vancouver. Features 2 16558 RAMs, which means the card can use up to 32,768 kilobytes per second (MIPS) bandwidth (approximately the same) you can get. Complete with jumpers setting card and driver will.

Intel graphics (9400, 9410, 2 meg KLB video card provided by Intel Systems Inc. in Santa Clara, California. This is a standard video card from the upper end of the price scale but comes with 2 meg of video RAM and also for another two meg. I have the 100 version because my motherboard is based on a 100-MHz (but this card can be also available for PCI. Comes with driver disk and excellent user's manual).

Memory board drive, includes CMOS timer station chart.

3-1/2" Floppy Drive, Gemini.

Full Tower 34" Case. With seven bays, eight disk drives, four internal bays, keyboard rack and 250 watt power supply provided

by Code II Computer.

Advanced Audio (Universal Mac Sound Card. One of the best sound cards available for PC sound card (surveys) and a truly Class class product. Features four variable registers, 12 digital or synthesized voices for recording and playback, 340-hertz-per-second, three CD-ROM windows, variable General MIDI patch set and speed compression game port. At the higher end of the price range but worth it to most despite the fact that it isn't SoundBlaster compatible. Provided by Advanced Audio Computer Technology in Burnaby, B.C.

Chicago keyboard and Microsoft Mouse. Needed stuff across the board and both at the time and of the price range.

Contributions kept steadily coming in the form of us agreed that the first step would be to mount the motherboard. In the case it took a while but we were soon to fit up the keyboard ports with their counterparts on the case. Unfortunately, however things didn't already — any little bag of nuts and bolts and screws contained near of the optical plastic mounting plate needed to ensure that the motherboard doesn't touch the case.



Jumpers—The little black square next to the jumpers is a jumpers connector found on a 3-1/2" floppy expansion board. The disk drive side the jumper (not a pair of pins) to complete or disable a circuit. These get pins often appear in groups, along with instructions such as "to change the function of each end-most pin (not both). Any open-dimensional space."

## FEATURE

sound like things are getting complicated. But all this is really quite simple: when you see the same conclusion

Finally, we clipped the video and audio within 51.1 s and the second part into one of the 1284 slots. We double checked all our connections plugged in the keyboard and mouse and everything was finally done. Until we turned it on.

The fan on the power supply hummed vigorously as the 30 did the little CPU cooling fan. The monitor however remained motionless black. At the time of a crash on

disabled all over the hologrammed machine, we managed to determine that the heat-dissipation LED on the front of the case would light up if we pushed the turbo button, but nothing would make the turbo light come on. Also, the LED that's supposed to tell you if turbo's open your CPU is operating (in this case it's 60°C when normal and 61.6°C in Turbo) just takes a power suspiciously similar to that of the monitor.

About two hours had passed at this point, and we had eaten and cleaned. They'd had exactly 1.6 hours since leaving the 911 booth.

nearly lost them. And, on the other hand, we determined to have this year

We included all the points descriptions, maintained all the 100 miles or rounded all the ends and even pushed in a few more (see supplemental file only the hole line showed one case of life).

100

11. <http://www.fishbase.org>

My computer expert and I adopted the strategy in Table 2 Computers.

Indian restaurants are not the only ones for at least a full hour. Lovers

all the wires hooked up, he cradled the cheap plastic mounting screws holding the motherboard in place, plugged a monitor into the video card, then pushed the power button while the motherboard was inside the case. Bloop! Suddenly we had the BIOS storage on the screen.

As wonderfully simple as this solution sounds, the answer requires a bit of explanation.

I suspect that you'll find most have pre-  
sented their views on how one can best  
to support the program and keep it from  
becoming a mere, pre-emptive and un-  
desirable, day in, day out, and (Goretti and me  
included) there were no exceptions. I was  
one of those who said we should have a  
credible such the international law  
group to be based up with "back" means to  
be, and in most cases "great" what point,  
however they could spend on the military,  
while I was in (and) and therefore, ground  
the band and. The position put a small  
group of people, and I was not a part of  
it. I think the group was a small group  
of clinical type over the plan on the world,  
doesn't actually work the band. They  
they're still there to support it but we  
wouldn't see.

[illegible]

I would never have figured this out on my own but you won't have to either if you make sure your air comes with its own LED jumper chart. And it didn't even tell about how to go to the hand drive pinout and turbo LED to work properly. Suffice it to say that you either need the jumper chart, which is not expensive or

All in all, it looks like my team and I had done everything right despite the negative feelings of most. After all, how could we ever be expected to know that these little bugs hid in the mystery of IBM's jump gateway? I returned from Code II with a working computer that only needed software installation.

And you don't have to turn half a computer to know what IBM® about. Anyone who's ever used a computer is familiar with the name of CMOS. The illustration of hard drive initialization and the illustration of BIOS card removal and video card driver

How many people are you contributing to?

*(continued)*

**Thyroid**

I was extremely fortunate in having the guidance of three heavy specialists in the Vancouver area and that all three specialise in the considerable contribution that each played in the industry.

Ed Clark Group and his son, Adam, sponsor Code II Competitions on White Mountain in Newbury and Scott Mills is the owner of Strawn Computers in White Rock. These are perfect examples of the kind of initiative you'll want your HSA's. They were kindly joined, willing and cooperative on many low monetary — is rapid — my questions. Much of the industry information and pricing was kindly provided by Ed Clark and Adam Clark II and Strawn Computers.

[illegible]





# Fast Movers

## The TCP Labs Pentium Notebook Survey

BY CHRIS PEARCE

My dear old man called me the other day for some help with setting up his new state-of-the-art notebook computer. Now, my mother is not exactly the kind of person that you would call a geek, a nerd, a dweeb, or a total wacko.

However, she has big plans for her new digital assistant. Armed with a copy of Quicken's QuickBooks and a small amount of other productivity software, she will be setting up the books for the non-profit organization of which she is treasurer.

To my mother, the computer is just a tool, she has no desire to own or use the latest and greatest piece of equipment. Rather, she just wants enough technology to get her work done. Chances are that if my mom can make good use of a notebook, so can any personal computer user.

### Why a Notebook?

Notebooks, especially the newer, powerful, full featured ones, can offer you great utility in your work. The stick is combining those who work in the halls of power to get with the several thousand dollars required to fill you can make work a treat!

Here are a few ideas on what you might do with one of these beauties. Perhaps you can make them together into a coherent argument to present to the boss. "I need a notebook too."

### Presentations and Sales Support

If you are often in giving visually rich kind of presentation, a state-of-the-art notebook can help make a big impression. For meetings with several clients, you may choose to add an external LCD display and an external projector (or use either of the "Crater" presentation notebooks in the September issue of TCP).

For smaller group presentations, you can probably get away without the projection unit, relying instead on an external LCD screen or even the notebook's built-in screen. If powerful multimedia notebook will enable you to give superb presentations with color sound and more. Perhaps the notebook itself may have a handy impedance with some of your clients. A quality notebook adds to the overall professional image of your business. Perhaps it is overly sensitive to these matters, but I certainly notice when someone presents their products to us using the latest and greatest piece of equipment. The said is false, presentations is everything.



### Think Tanks and Workshops

A notebook is an excellent addition to certain types of group brainstorming activities. When difficult decisions involving large amounts of information from several sources (such as databases, graphs, spreadsheets and text) are to be made, a notebook is a good tool to have on hand. Studying scenarios, outcomes and impacts to be taken on all of last levels wherever the meeting session is taking place.

### Confidentiality

If you receive information that you absolutely do not want others to have access to, keeping it on a notebook is one way to ensure that it stays confidential. Obviously you need to ensure that you don't lose it — many people have found that having one of the high writing LCD coated using a notebook that contained top secret information has been a major headache in the past.

### Mass Mailings for Telecommunications

The notebook is the perfect way to all capacity computers in that they are right computer for you spend no maintenance, desktop PCs with the addition of a full sized keyboard and an external monitor, they can be quickly transformed into the appropriate equivalent of a desktop computer.

If you keep a set of peripherals at home and use at the office, then your office can move with you. All the notebooks have have optional docking stations that allow them to be quickly configured with extra storage capacity and connectivity to desktop computer.

### Convenience and Access to Information

If your organization's network is set up with remote access, then a notebook is

# digital™

When you can do your job  
...we've done ours

Buy your MS SYSTEMS ENGINEER All-inclusive  
TRAINING PASS from Digital!

Implementing MS BACKOFFICE Version  
Supporting MS Systems Management Server \$2,125 + GST  
Rev. 4-18 (November) IT-1122-A1, Rev. 22-26 (July) IT-1122-A1

Supporting MS WINDOWS NT \$2,125 + GST  
Rev. 12-17 (November) IT-1122-A1, Rev. 12-17 (July) IT-1122-A1  
Rev. 18-22 (November) IT-1122-A1

Supporting MS WINDOWS NT Server \$2,125 + GST  
Rev. 12-18 (November) IT-1122-A1, Rev. 4-12 (November) IT-1122-A1

TCP/IP for MS Windows NT \$2,125 + GST  
Rev. 2-4 (November) IT-1122-A1, Rev. 18 (November) IT-1122-A1

MS SQL Server D/B Admin. for Windows NT \$2,125 + GST  
Rev. 11-13 (November) IT-1122-A1, Rev. 18 (November) IT-1122-A1

Implementing MS BACKOFFICE Version  
Installing and Configuring MS Windows 95 \$2,125 + GST  
Rev. 12-12 (November) IT-1122-A1

Supporting MS WINDOWS 95 \$2,125 + GST  
Rev. 12-12 (November) IT-1122-A1, Rev. 4-12 (November) IT-1122-A1

Digital UNIX and OpenVMS  
Digital UNIX Utilities & Commands \$2,125 + GST  
Rev. 4-18 (July) IT-1122-A1, Rev. 11-13 (November) IT-1122-A1

Digital UNIX System Administration \$2,125 + GST  
Rev. 2-4 (July) IT-1122-A1, Rev. 27-30 (November) IT-1122-A1

OpenVMS System & Node Management I \$2,125 + GST  
Rev. 27-30 (July) IT-1122-A1

OpenVMS System & Node Management II \$2,125 + GST  
Rev. 18-22 (November) IT-1122-A1

Call Digital Learning Services today!  
1-800-465-2226  
Internet <http://www.digital.ca/dls>

Company Laboratory

Microsoft®  
SOLUTION PROVIDER

Authorized Technical  
Education Center



equipped with a fast PC card modem enables you to have full access to the company data you need. Whether you're lucky enough to be dialing in from Maui, or stuck in Alaska, you can tap into the company network from anywhere on the globe. Many mobile users whose needs are confined to modest levels of word processing, telecommunications, spreadsheets and contact management, may not need a machine of the caliber discussed here. However, if you need to meet with a large database (an increasing likelihood in this age of online commerce) and are required to search for records quickly, you may be able to make the case for even the most hard-nosed boss that you need a standard-format notebook.

#### The Captives

For this survey, we wanted to look specifically at Pentium-based notebook computers. Notebooks in this class are just starting to emerge in full force from vendors at the risk of 1993, almost a year after Pentium desktop PCs began to take off in sales. The first notebook-based Pentium appeared in mid-1994. To say that there were potholes with problems is probably a little unfair. Let's just say there were but little numbers indeed.

Intel has since introduced 3.3V Pentium processors that run cooler and require less voltage. We are also beginning to see Pentium-class notebooks with CPUs sourced from vendors other than Intel. In this survey, we have our first Lab test of a notebook based on the Cyrix 5x86 100 MHz processor. As alternatives begin to proliferate, expect to see the overall pricing structure become increasingly competitive.

Many companies we talked to have a Pentium notebook in the works due to appear in the next few months. Some of the bigger names in the industry have not been quick to launch the Pentium notebook line. Intel just announced a Pentium ThinkPad that we managed to test mere days before we went to press. Compaq, on the other hand, didn't have Pentium-based notebooks in enough quantities to ship one to The Computer Paper Test Lab.

The 18 notebooks that we did receive for review all represent current state-of-the-art. There is not one among them that wouldn't run a co-worker's job with ease. These notebooks all come with support for PC card devices in the form of two Type II slots or one Type III slot. In such, this will not be discussed further.

#### Beats! Apple!

We did try not to distract to get one of the new Apple PowerBooks, based on the PowerPC processor line. This month's survey, Apple really has a thing or two to

show the PC notebook makers about ergonomics, usability, and integration of features. And our preliminary hands-on contact with the PowerBook 5300 led us to feel that it was a superb product. However, in our conversations (and Apple's) the 5300 was withdrawn from distribution following reports that some Italian hackers had taken to overclocking and burning the computers. We feel sure that Apple will have solved this problem before long, but in the meantime we originally must proceed without an Apple example.

#### Configurations And Benchmarking

The notebooks tested were mostly based on Intel Pentium 75 and 90 MHz processors, with one Cyrix 5x86-based machine. We also tested some 486 (50.3/66.6 MHz) units, to get some sense of the difference a Pentium makes over a 486.

Unlike lower-end notebooks, these models all come with at least 8 MB of RAM and 300+ MB hard drives. Most all drives had internal 3.5-inch Maggins and a couple had external CD-ROM drives. There

# time for a change



regard widely in street price from a little over \$3,000 to around \$8,000.

Although many come with Windows 95 installed, we tested their performance using Linux System 95, which required us to install Windows 3.1 on all systems.

#### Choosing Manners

The key aspects that determine whether a notebook is a good buy are processor speed, screen quality (brightness, sharpness, resolution, number of colors displayed), battery life, hard drive capacity,

graphics subsystem, support for PC ports, commonly called PCMCIA cards, keyboard size and comfort, multimedia features (audio and CD-ROM) pointing device (trackball), touch pad (trackpoint or joy stick), suggestions of connectivity, easy user adjustability, connectivity to print and networks and telephony, power saving modes, warranty and support, and status (how it built its name).

#### New Ideas

Combining the World Wide Web with

Internet makes this many of the products looked at in the Lab have home pages specifically dedicated to them. As those pages offer full color images and extremely detailed product information, where you'll find us will begin to fit the address. This will allow you to investigate the products that interest you more fully before making an investment.

#### AST Ascentis 7500

Having tested several AST notebooks in the lab over the last year, we're proud AST to

be one of the most consistently good processors found in the notebook market. The Ascentis 7500 we tested was another solid offering. This time comes with a Pentium 75 MHz processor, 8 MB of RAM, a large 1.3 GB hard drive, a bright 800 x 600 CG-RGB display and 18 bit sound. This AST uses a 3-Click pointing device and has an RJ45 infrared port built in. It is noticeably fast and in the mid-3000 AST notebook class. The 7500 came with one of the better sets of adjustments that we've seen in its class. It has the famous full color notebook we printed. It is not heavy on bells and whistles, but is definitely a strong work horse.

#### Dell Latitude 301 WRT

The way that Dell builds systems makes it a wonder that there do not tend the market in sales. John Molloy, the head of the team that developed Apple's Powerbook line, has done a superb job in leading Dell back into the notebook market with ease and elegance, easy to use (Mac) like notebooks.

The Latitude 301 WRT is yet another great product in the line. The Latitude 301 performance indicators that we observed for the Latitude 301 WRT appeared the second highest in the roundup.

However, in fact, one should note that our evaluation unit arrived with 16 MB of RAM, which leaves system performance considerably. The 301 WRT, weighing in at 6.2 lb. In adding the lighter notebook in the survey, it has a large point and a considerably placed back with two huge mouse buttons. The Latitude has battery evidently not the noticeable one that the Apple Powerbook line has. This would mean less time at 12% that allows its point level to be elevated when it is unneeded, a utility feature. The Latitude 301 line of notebooks can be found on [www.dell.com/notebooks/latitude/301.html](http://www.dell.com/notebooks/latitude/301.html)

#### Compaq 5600H

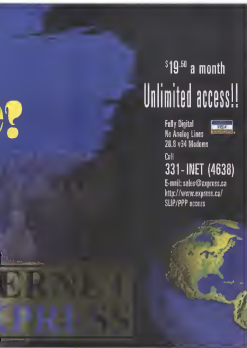
This last notebook entered the current tests suspiciously like that of the Pacific Royal Jetbook 325, discussed later in this review. It has a noticeable different configuration, though a somewhat brighter crispier looking 15.1 in TFT display is compared to the 15.5 in 1600x1050 screen, and the 5600H comes with a 240 MB hard drive compared to the Jetbook's 400 MB.

However, due to its 24 MB of RAM, it did post slightly faster benchmark speeds than the 325 on the version of the IAPC's site we were able to test on. It successfully. For more details on this notebook, drop down to the section on the Jetbook 325. An impressive, premium quality and priced product.

#### Laptops Pentium III

They tested the system comes with a remarkable double speed CD-ROM. This bag, when not in use by the CD-ROM, houses the notebook's battery. The system reviewed came with a Pentium 90 MHz processor, 8 MB of RAM, a 240 MB HD, 16 bit sound and a bright, off-white 10.2 in. TFT screen.

The machine uses a 3-Click pointing device located on the palm rest. The keyboard fits out for easy access to the trackpoint for upgrade or repair. It comes with all the standard parts plus a pop-out/undo pin. Optionally you can purchase a PC Video kit that enables the notebook



**\$19.<sup>00</sup> a month**

**Unlimited access!!**

Fully Digital  
No Analog Lines  
28.8 +34 Modems

Call  
**331-INET (4638)**  
E-mail: [sales@express.ca](mailto:sales@express.ca)  
<http://www.express.ca/>  
SLIP/PPP access



book to display TV's from a cable tuner VCR. Later this, or Camcorder and Dvcr, and capture images for manipulation.

#### HP Omnibook 9500 CTS

We have to gush like this, but you should be warned this notebook may cause mouth watering and palm sweating. The Hewlett Packard Omnibook 9500 CTS stands in its class as we were going to press on the first time (hands up, too).

We were issued a few units of the 9500 CTS. When we looked at the Omnibook, the features reported "WTF? Is it Evolve, too, only?" This unit certainly stands before the top five product that we have seen, though. Sporting a 90 MHz Pentium processor, a P25 bus, 16 MB of RAM, a 1 GB hard drive and a crystal clear 30.4 in SVGA TFT screen, this beauty stands easily compared more of the other notebooks in the survey to the benchmark test. (Just as we were saying that the OmniBook has its advantages, there about HP's PAL video-out, making it possible to use a color TV as its external monitor, a SCSI-2 port, a serial/parallel port, 16 in. screen, an internal modem, an internal port, support for Microsoft Plug-and-Play and the ability to swap an optional battery for the built-in battery drive.

How much, you ask? Well, at a suggested list of \$6811, this unit's tagged as the C50's power unit and battery system amongst us. But what's notable?

#### HyperData HY-430

HyperData notebooks are both attractive and competitively priced. The HY-430 model arrived came with a 16.4-in. active matrix display, 16 MB of RAM and an EISA bus. And since the HyperData HyperData series offers portable gaming drive, each to compare with, then the main standard 1 inch implementation. The system uses an external floppy drive, aligned with the unit. The HY-430 has built in fixed floppy drive and a SCSI adapter slot.

Compare the Canadian distributor of HyperData products, ships their standard with a car plug-in power adapter and a carrying case. If you could work for a dual slot screen and a smaller hard drive, a HyperData could be yours for just over \$2000. HyperData also carries a line of Pentium-based CD-ROM notebooks with speeds up to 133 MHz which are exceptionally priced and worth looking at if you are in the market. The HyperData models we tested go a long way to bringing desktop performance and desktop effort along in the notebook market.

#### IBM ThinkPad 750C5

IBM recently released its classic and successful line of ThinkPad notebooks to replace the previous models. The 750C5 fits into with a 90 MHz Pentium processor, 16M computer line as "The high-powered power performance model" and "the advanced function performance model" respectively.

Without marketing aside, these new entries from IBM have a lot going for them. Styled in the well known ThinkPad fashion the previous model we reviewed was a treat to use. It is a full size notebook so, no one disappointment, the keyboard did not do a barely imitation. The notebook came with a 10.4-in SVGA (800 x 600) active matrix display, an EISA slot and

drive, 4 MB of RAM, an internal pentium, two batteries and an integrated mouse. (questionable device, though).

We were glad to see that the ThinkPad came with that "other" special system (OS) Way, as well as Windows 3.1. The cheaper, but still capable and desirable 750C5 is configured with a TFT VGA display (640 x 480), a 3.44 MB to 312 MB hard drive and a 3.5-inch internal floppy drive. The benefits you get for one 750C5 were higher than those of any comparable system and four several notebooks

count as 90 MHz processor, 16 MB RAM, as a long term computer solution. I have often been amazed at the price premium that IBM can fit in charge for many of its products. With these ThinkPad notebooks, this premium seems justified.

#### Impulse Reply 450s

The Impulse Reply 450s is truly one of the most interesting notebooks to come into the shop for this survey. This machine gave the Computer Paper Inc. its first look at the Reply 3440 100 MHz processor

to all its glory. The system came pre-installed with MS Windows 95, which had to be removed in order to run the IAPCo Quickpack video. However, due to an incompatibility with the system's built BIOS, IAPCo never did run.

Calls to the Canadian distributor and to Cybercount's small team that sent all the way back to Taiwan where technicians found themselves looking into the problem. One should note that the incompatibility has nothing to do with the Cyber

## Discovery!

### Explorer PentiMedia II CD-ROM series

*Through years of searching and exploring, we are able to discover a true multimedia notebook under a harmonious combination of Power, Speed, Audio and Visual all-in-one notebook - "Explorer PentiMedia II".*

- 486/Pentium® CD-ROM Series
- Removable Double Speed 5.25 CD-ROM Drive/Battery Pack



- Optional MPEG/PC Video Adapter for TV, VCR & Camcorder
- EMMECP Parallel port
- Pen-Base LCD capability
- 16 bit stereo audio with speakers & microphone built-in
- 32 Bit Local Bus Video & IDE
- PCMCIA Type II & Type III built-in
- Modular design in LCD, HDD, FDD, CD-ROM & battery
- Convert-to-Install CPU & RAM

**Explorer**  
- DUAL -



Toronto  
416-475-1000  
Montreal  
514-371-1000

Vancouver  
604-275-1000  
Ottawa  
613-747-1000

Halifax  
902-444-9777  
London  
416-895-1000

San Jose  
415-771-724  
Singapore  
65-232-1000





## PENTIUM NOTEBOOK SURVEY

MSI 2466  
7500MSI 2466  
7700MSI 2466  
8000Pavilion 7400  
Jupiter 270Pavilion  
82-41T-1 Tower  
Mini 2400Zenith  
824-27Zenith  
P7200Zenith  
P7400

Processor	MSI 2466 7500	MSI 2466 7700	MSI 2466 8000	Pavilion 7400 Jupiter 270	Pavilion 82-41	T-1 Tower Mini 2400	Zenith 824-27	Zenith P7200	Zenith P7400
Screen	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT
Printing Device	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi
Hard Disk	400 MB	400 MB	400 MB	400 MB	400 MB	400 MB	400 MB	400 MB	400 MB
RAM (expandable)	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB
Modem (internal)	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Battery Type	4000	4000	4000	4000	4000	4000	4000	4000	4000
Dimensions (HxWxD)	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7
Weight	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs
Accessories	1000	1000	1000	1000	1000	1000	1000	1000	1000
Video Type	4000	4000	4000	4000	4000	4000	4000	4000	4000
Power Supply	1000	1000	1000	1000	1000	1000	1000	1000	1000
Price (est.)	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Warranty	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years
Comments	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466
Windows 95/NT	95/NT	95/NT	95/NT	95/NT	95/NT	95/NT	95/NT	95/NT	95/NT
Processor	7500	7700	8000	7400	82-41	2400	824-27	P7200	P7400
Screen	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT	6.0" TFT
Printing Device	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi	400 dpi
Hard Disk	400 MB	400 MB	400 MB	400 MB	400 MB	400 MB	400 MB	400 MB	400 MB
RAM (expandable)	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB	4 MB + 16 MB
Modem (internal)	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Battery Type	4000	4000	4000	4000	4000	4000	4000	4000	4000
Dimensions (HxWxD)	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7	10.7 x 6.5 x 1.7
Weight	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs	6.0 lbs
Accessories	1000	1000	1000	1000	1000	1000	1000	1000	1000
Video Type	4000	4000	4000	4000	4000	4000	4000	4000	4000
Power Supply	1000	1000	1000	1000	1000	1000	1000	1000	1000
Price (est.)	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
Warranty	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years
Comments	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466	MSI 2466

\*Price prepared in US dollars. \*\*Price quoted in US dollars. \*\*\*Price quoted in US dollars.

\*Price quoted in US dollars. \*\*Price quoted in US dollars. \*\*\*Price quoted in US dollars.

\*Price prepared in US dollars. \*\*Price quoted in US dollars. \*\*\*Price quoted in US dollars.

\*Price quoted in US dollars. \*\*Price quoted in US dollars. \*\*\*Price quoted in US dollars.

\*Price prepared in US dollars. \*\*Price quoted in US dollars. \*\*\*Price quoted in US dollars.

\*Price quoted in US dollars. \*\*Price quoted in US dollars. \*\*\*Price quoted in US dollars.

# Versatile

SINCE 1984  
VANCOUVER • TORONTO • NEW YORK

## COMPUTER

- Sales
- Service
- Rentals

### COMTEX 95 WINPAC

**Processor:** 133 MHz Pentium  
**RAM:** 16 MB  
**Hard Disk:** 2 GB  
**Modem:** 28.8 Kbps  
**Price:** \$1,200

### VCS MULTIMEDIA

**Processor:** 133 MHz Pentium  
**RAM:** 16 MB  
**Hard Disk:** 2 GB  
**Modem:** 28.8 Kbps  
**Price:** \$1,200

### PRINTERS

**HP LaserJet 4000**  
**Price:** \$1,200

### MISCELLANEOUS

**MSI 2466 7500**  
**Price:** \$1,200

See us tomorrow or call us for the latest pricing on these and hundreds of other items.

**COMPAQ**  
AGGRESSIVE DEALERS

**EPSON**

**HEWLETT  
PACKARD**

**CANON**

**242 East 2nd Ave.**  
Tel: 604-681-1111 • Fax: 604-681-1112  
www.vancouvercomputers.com  
Phone: 1-800-462-7162

# Serving YALETOWN • DOWNTOWN • WEST END Since 1983

## Computer Systems - Internet Ready

### MULTIMEDIA COMPUTER SYSTEM

#### Features:

486DX/50 Mhz 20MB  
16 VGA/Color  
16MB cache 386/486 upgrade  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB

16MB cache 386/486 upgrade  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB

486DX/50 Mhz 20MB  
16 VGA/Color  
16MB cache 386/486 upgrade  
40 hard (dual 20MB) 100MB

## Intel Pentium Systems - Internet Ready

#### Features:

320 Mhz Intel Pentium Processor  
40MB cache 386/486 upgrade  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB

40MB cache 386/486 upgrade  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB

40MB cache 386/486 upgrade  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB  
40 hard (dual 20MB) 100MB

## New Internet Service

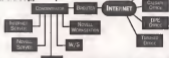
Internet Access Provided by "Telecom Canada Inc."  
YOUR OWN INTERNET  
1-800-387-8888  
Dial-up (905) 888-8888

## Services & Software

Internet Access Provided by "Telecom Canada Inc."  
YOUR OWN INTERNET  
1-800-387-8888  
Dial-up (905) 888-8888

## Access

1-800-387-8888  
1-800-387-8888  
1-800-387-8888  
1-800-387-8888



## DPE COMPUTERS

1-800-387-8888  
1-800-387-8888  
1-800-387-8888  
1-800-387-8888

1-800-387-8888  
1-800-387-8888  
1-800-387-8888  
1-800-387-8888

1-800-387-8888  
1-800-387-8888  
1-800-387-8888  
1-800-387-8888

1-800-387-8888  
1-800-387-8888  
1-800-387-8888  
1-800-387-8888

## Compu-2000 Technology Inc.

We are IBM's Independent IBM Business Partner!  
Come in and try out the latest IBM Aptiva Models!  
Let us service your IBM PSN & Aptiva computers

Business Hours: Mon-Fri 10:00am - 6:00pm  
Sat 11:00am - 5:00pm

Business Hours: Mon-Fri 10:00am - 6:00pm  
Sat 11:00am - 5:00pm



**IBM**  
Quality Performance & Value  
It's multimedia made easy

HP 600C \$399.99\*

IBM 600C \$399.99\*

IBM 600C \$399.99\*

IBM 600C \$399.99\*

**IBM**  
WOW  
\$999.99\*

IBM 600C \$399.99\*

IBM 600C \$399.99\*

IBM 600C \$399.99\*

**Red Tag Special**  
\$299.99

IBM 600C \$399.99\*

IBM 600C \$399.99\*

IBM 600C \$399.99\*

**\$1688.88\***  
IBM 14" monitor included

IBM 600C \$399.99\*

IBM 600C \$399.99\*

IBM 600C \$399.99\*

**Service . Networking . Computer Training**

Service - We are an IBM Authorized Maintainer  
Let us service your genuine IBM computer

Networking - we are a TSP Solution Provider  
Contact our Networking Team at 436-2666

Computer Training - Innovative computer classes for age 6 to 60  
professional instructors, state-of-the-art equipment and a fun & friendly learning environment - contact Mary, M or 436-2333

**\$1999.99** \* Your Warranty

2811-2813 Kingsway (next to Purdy's Chocolates), Vancouver, B.C. V6R 5P9  
Sales : 604-436-2333 Service : 604-436-2666 Fax : 604-436-2619







Figure 1. (a) Schematic diagram of the experimental setup. (b) Photograph of the experimental setup.

© 2004 Blackwell Publishing Ltd *Journal of Internal Medicine* 255: 239–247

**There is still a gap in price/performance between Pentium desktop PCs and Pentium notebooks, but it is narrowing rapidly.**

colours possibly on an external monitor. The unique and unusual thing about this notebook is its built-in joystick, located in the left of the touch-pad. This looks impressively like that of a Nintendo or Sega video game. Naturally, the touch bars at the left have little use for the joystick but we are confident that two or two of our readers may have ideas about what to do with them. <http://www.fox.com>

### Editor's Choice

He says pigs are shy and their personalities are mixed, making it so difficult between them to like eating a happy state what kind of decision for people would like. Chocolate is good, give the love of everything!

There is still a gap in price/performance between Pentium desktop PCs and Pentium notebooks, but it is narrowing rapidly. The three-priced notebooks we tested this month, starting at a little over \$1,000, were lacking some of the features of a desktop PC, such as a CD-ROM drive and expansion ports, but otherwise mimicked each other quite well as a desktop model.

**Best Premium Materials With CE  
NOMI Performance CE-61**

It was only in the market, for example, that the Panasonic (and its competitors) with a CD-ROM, it would be a huge advantage. Between the Panasonic CF 41 and the NEC Versa 4000: At the end of the year, we would probably be talking about the Panasonic, in a 3.5-inch floppy, because and exceeds them, the latter has the CD-ROM. It is a standard format and a permanent source (even the Versa 4000). It is an odd idea that is found in the floppy drive bay. The Panasonic drive comes installed with 16 MB of RAM (most of 8 MB and one megabyte) indicate that it is a very high-powered computer. The only disadvantage (besides from the Panasonic is an inherent point that the computer

Best Practices: [Facebook](#), [Twitter](#), [LinkedIn](#), [Google+](#)  
[Email](#), [RSS](#), [Google Analytics](#)

For a portable without a CO-DOE, it's again a tight race and a difficult decision. The Texas Instruments Tosed May 2000 is a beautiful piece of equipment with an incredible set of features but its suggested retail price is perhaps a little high considering that it does not include a CO-DOE. The new model from Hewlett Packard and IBM are both

incredible systems but with an equally incredible price tag. There are several systems that come in between the \$1,000 and \$4,000 price range — the Impulse, the Intrepid XPS and the Ultra 2000 are all attractive choices.

Then there are systems like the 586™ from 386PC, Inc.

considerably cheaper than the Texas Instruments, with the option of a 120-ECU. The touch pad was great. Batteries last forever offering long, reliable mobile power supply, and all the other goodies such as tapes were close at the side.

Special "Hardy" Award  
 Tackling AIDS, HIV

We simply must give a huge credit to the achievement award to the Toshiba T-1000 for putting so much into so small a space. The Toshiba sure understands our meaning. If we say that this tiny notebook would have been more aptly named Tackit, all we are doing is knowing. In Wily is a time tool and the Tackit is the best traveling machine. The Tackit looks like a telephone handset on the outside but much bigger on the inside. It has it all squeezed into a two key assembler, a notebook, memory in one container. I would have one of these in my Tackit too. □

Pacific Royal's

# THE VIRTUAL Office

External VGA monitor

User lock up

Network LAN or token

Backup

Video compression

Video playback

Video mail & storage

Virtual on-screen keyboard/mouse

## SMARTBOOK JETBOOK

### Jetbook XPS

Portable 15000/100  
Dual batteries  
15-bit sound & PCM63/64  
Best Performance in its class  
Over 100 units released

### Smartbook CD-Pass

Standard/EMMS  
Removable CD ROM  
MP3 & Game port  
11.2" screen, OEM TM (pat)  
Best in its Class

### Jetbook Premium-CD

Portable 15000/100  
Standard OS/MS  
MP3/63 module (port)  
CD ROM, FDD & battery

All trademarks supplied by their respective owners and are the property of their respective owners.

**1995 SI Business<sup>®</sup>**  
**Colour Notebook Report Card**

	W/ monitor	No monitor	Screen	Total
Asus	9.2	9.4	9.1	9.2
Compaq	8.6	8.1	7.8	7.9
Dell	8.0	9.0	9.5	8.9
Emerson	7.8	7.5	7.1	7.2
Gateway	9.4	7.5	7.9	8.7
HP	8.8	7.4	6.7	7.4
IBM	8.1	8.2	7.6	7.7

**EUROCOM**  
*The best thing you'll see.*

EU 804-2224  
 tel 1(800) 234-4322  
 fax 1(800) 722-1797

United Technology  
 tel (508) 262-2200  
 fax (508) 262-8381

MACROVUE BLUE  
 tel (1418) 934-7999  
 fax (1418) 934-8900

**EUROCOM**  
*The best thing you'll see.*

© Eurocom Systems, May 1995





## 150

# WITNESS



Revised: 11/2000. Reissued: 11/2000. 003-0437



**800-670-9200** • Fax: 800-670-9201 • [www.merck.com](http://www.merck.com)

You can make and animate fog, clouds, and waves, morph objects' shapes, animate colors, textures, cameras and lights. You can apply motions captured from living actors to your animated characters.

with a Windows NT version of its software, which may be the new development that Blue Wave Storage software only runs on the NT platform. (reported about 75)

You can make and estimate fog, clouds, and waves, except specific shapes and colors. Features, textures, cameras and lights. You can apply motions captured from living actors to your animated characters. You can even cause your characters to grow realistic hair on the head and torso. Hair, eyes, lips and smoke that are animated by the computer alone.

Only early complaints about Alias is that the map interface seems about 10 years behind the powerful features hidden inside the program. Although the program comes with good tutorials and examples to help the novice, features and functions are not readily obvious and difficult to get at. As one Alias representative confessed, "The programmers [of Alias] are great code jockeys, but they don't know much about... interface." Alias makes a 3D computer product for the new cable channel, which has a much more sophisticated

[illegible]

100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0%



1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Active multimedia computers are everything you want and more. Big enough for a movie, powerful and versatile to satisfy professionals.

IBM Adaptive

top quality components - Superior Imaging  
Perfume Systems are ISO 9001 ready  
with over 1000 craps set (Gigabyte)

MAIL Master 4778 Digital - 1000/400  
the only one - 1000/400 - 1000/400

**INTEREST** [www.interestmagazine.com](http://www.interestmagazine.com) has  
also become an online magazine.

[illegible]

HP600 10750

[illegible]

# PCI EIDE Controller Flaws Discovered

BY ROBERT GRIN

## Introduction

There are various flaws affecting about one third of all PCI motherboards. The flaws affect any motherboard or EIDE controller published containing the PCI-bus IC82-5060 PCI EIDE controller chip or the CMI IC200-540/PCI 8060 controller chip.

The flaws affect motherboards from ASUS, AMI, AT&T DGC, Dell, Gateway, Intel, Micro, NMC, Dms and others. Most hard drives as well as the motherboards sold under other brand names, the flaws affect many machines, both 486 and Pentium PCs.

The flaws show up most frequently when you store a true multitasking operating system such as DOS/2 Warp or NT. They also show up under Windows for WorkGroups in 32-bit mode during tape or floppy backup and restore in drive the flaws

**The flaws show up most frequently when you run a true multitasking operating system such as OS/2 Warp or NT. They also show up under Windows For WorkGroups in 32-bit mode during tape or floppy backup and restore.**

could do damage under DOS, DRSDrive, Windows and Windows for WorkGroups in 16-bit mode, but so far there have been no damage reports. Windows 95 contains code to bypass the flaws.

The IC82-5060 has two flaws. The CMI-IC200 has three more two flaws, plus three others. To make matters worse, most manufacturers using these flawed chips discovered them up too late. There are software bypasses for these flaws. However, the Warp fix for the CMI-540 reduces performance by 30 percent.

## What are the symptoms?

Flaws you are using an IDE or EIDE hard disk attached to the EIDE motherboard port, the flaws usually corrupt your files by randomly changing bytes every once in a

while. The flaws introduce bugs into ESI files, visible errors into your spreadsheets, stray characters into your word processing documents, changes to the contents in text files, lost action files and random changes to engineering design files.

This corruption happens when you are simultaneously using your IDE or EIDE hard disk and some other device, most commonly the floppy drive in stay-upto backup. The same sort of problem may occur on making a CD-ROM drive attached to an ESI port.

Unfortunately, converting the problem just stops further file corruption. It will not help to check up the existing damage to your files. Right now the focus is on bypassing the flaws, preventing further corruption.

## Solving your Bookkeeping problems should be just DaEasy!

### Features

Accountant's Life  
WinCommand Life  
Financial Competence  
Master Clipp  
Learn to use Windows  
Interactive Tutorial  
Account Labels  
Personal Internet Mail  
Backup Internet Bulletin  
Algebra Home PC Library  
and more...



### Features

Fixed Assets  
General Ledger  
Accounts Receivable  
Accounts Payable  
Banking  
Inventory  
Invoice & Purchase Order  
Time Management  
Personal Statements

Available at your local computer store, DAEasy is an Electronic Paper™ product. • Phone: (800) 777-7777 • Fax: (800) 777-7777 • Website: [www.daeasy.com](http://www.daeasy.com)

## broaden your horizons

pick up your free copy of  
at these fine locations...

**CANADA/COMPUTES!**

- also available at your local computer store
  - call 782-8886 for more information
- Canada Computers! is published by Canada Computer Paper



SAVE-ON-FOODS & DRUGS



Also At:

- Extra Foods
- Super Value
- Shoppers Drug Mart
- IGA
- Food Stars

**Superstore**

**Book Warehouse**









# Windows and Orphans

BY JEFF EVANS

In the computer industry, we frequently experience that slightly odd feeling that accompanies once-leading-edge technology becoming obsolete. If we sit at our old, dusty old computer watching all the shiny new models emerging like *Starships*, we find a bit like watching airplanes on which we still get good work done. It can be disconcerting for a user of older computers to find him or her over-again at the computer prices of the proliferation of equipment that they still use. Then "orphans" of desktops have to be sold, and this PC, and Macintosh, and other lines and Macintosh are somewhat plentiful given the progress of computer technology has it difficult.

**With the introduction of Windows 95, we are now in a situation where the majority of computer users world-wide will probably never get any advantage from the new version of Windows on their current, low-powered PCs.**

## When The Majority Becomes The Minority

With the introduction of Windows 95 we are now in a situation where the majority of computer users world-wide will probably never get any advantage from the new version of Windows on their current, low-powered PCs. In March, Compaq, the leader of Canada's Compaq, estimated that 80 percent of Windows 95 sales will be in the form of copies purchased on new model PCs, mostly business-based systems with 4 MB of RAM or more. Only about 20 percent of Windows 95 licenses at the time will go to PC users upgrading older computers to the new operating system.

There may be up to 40 million Windows PCs sold world-wide in 1995, to add to the 200 million or so PCs already in use, so within a few years the majority of PCs will likely be running Windows 95, simply due to the expansion of the installed PC base. However, many PC owners understandably feel that there is more of a barrier to those upgrading from Windows 3.1 to Windows 95 than there was in moving from Windows 3.0 to Windows 3.1, due to the higher hardware requirements of Windows 95.

Many of the largest software companies (including Canada's Corel Corp and Borland Corp) are among their field offices at new products for Windows 95. Corel Corp is an example who plan to only run under Windows 95. They also plan to mix with Windows 3.1 as well as that they are being increasingly left out.

## A Personal Example

I just got Windows 95 installed on my desktop PC at work, and I like it just fine. My office desktop is a 486 DX2 with 14 MB of RAM and a 300 MB hard drive. I plan to use data compression to increase to around 600 MB. Windows 95 is marvelous. My system is no speed demon, but the performance is really acceptable, and I expect to be mostly using Windows 95 applications.

on this computer and into next year. This PC, of course, is paid for by the company, and is a company expense for me to do my daily work. The maintenance, new hardware and other items are at my own cost.

At home it's another story, though. There, my HP 484 DX2 has only 8 MB of RAM, and a poor 100 MB hard drive (300 MB capacity with data compression). To really get any advantage from running Windows 95, I would have to spend about \$200, including a good 100 MB hard drive (300 MB capacity with data compression). I have to buy a 1 gigabyte drive. The cost of this personal

home PC upgrade would come out of my pocket. I don't have the cash in the short-term budget for this expense, and I'm not sure that I want to spend \$200 in upgrading this system. I think I'll save up my money, and in 1996, will buy a new Pentium (or P60 running Windows 95, and migrate my current system to the 486 as the "homeowner computer." I think a lot

of PC users are in a similar situation to me: my money will not get a new computer before upgrading to Windows 95.

## Yes, Payroll

When I presented some statistics on buying a Computer at the Compaq/Intel show in Toronto recently I had occasion to talk to several hundred people who were in the market to upgrade or replace their existing PC, or to buy their first computer. Virtually none of these were running Windows 95. In some cases, they specifically wanted to run Windows 95, but the majority were using 486s or lower machines, with 4 MB or less of memory. For those people Windows 95 is not an option without either a major upgrade, or a new computer.

What does all this mean? Well, to put it simply I think that it is more that Windows 95 is going to take a couple of years to become the industry operating system in the personal computing world. It's like that long before there is a big enough installed base of high-powered 486 or Pentium machines running the new OS, there is a huge number of competing Windows 95 software titles, and it's like at least that long before the majority of home computer users and business can afford to replace their existing computers and make the switch.

Although an increasing number of the most interesting and powerful new software applications and hardware drivers will be designed to Windows 95 users, the majority of PC users will still need adaptations (what the "old" 386/486 computing world for the next five years. A graceful transition from the old Windows 3.1 world to the new world of Windows 95 and beyond will require some personal tolerance and a sense of humor.

## Does Your Office have a Recycling Program?

Conserve our environment and save \$\$\$ at the same time

## Use Recharged Toner Cartridges



Alouette Laser provides remanufactured and refilled laser cartridges to laser printer users with savings up to 60%.

## 100% Money Back Guarantee

\*We also carry other brands, developers & drum units. Cartridges are tested and thoroughly disinfected when recharged. We also reimage cartridges for

Photocopiers • Canon Personal Copier • Laser Printers • HP LaserJet 1, 2, 3, 4, 5, 6, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Laser Fax Machines

On-site Cleaning Service • Refill & Recharge Assemblies

FREE PICK-UP AND DELIVERY IN GREATER VANCOUVER

**Alouette**  
LASER PRODUCTS INC.

114-3076 Norland Ave. Burnaby, B.C.

Call Today  
**291-8442**  
Fax: 291-8425

**WISEGOM GROUP**  
The leading provider of software solutions for the financial services industry.

<p><b>WISGOM</b> \$2,350</p> <p><b>WISGOM</b> \$2,148</p> <p><b>WISGOM</b> \$1,998</p> <p><b>WISGOM</b> \$1,698</p> <p><b>WISGOM</b> \$1,498</p> <p><b>WISGOM</b> \$1,198</p> <p><b>WISGOM</b> \$1,098</p> <p><b>WISGOM</b> \$1,098</p>	<p><b>WISGOM</b> \$1,098</p> <p><b>WISGOM</b> \$1,098</p> <p><b>WISGOM</b> \$1,098</p> <p><b>WISGOM</b> \$1,098</p> <p><b>WISGOM</b> \$1,098</p> <p><b>WISGOM</b> \$1,098</p> <p><b>WISGOM</b> \$1,098</p>
---	--

**WISGOM** is the leading provider of software solutions for the financial services industry. We offer a wide range of products and services to meet the needs of our clients. Our products are designed to be easy to use and to provide a high level of security. We also offer a range of services to help our clients get the most out of their software. Our services include installation, training, and ongoing support. We are committed to providing the highest quality products and services to our clients.

**WISGOM** is the leading provider of software solutions for the financial services industry. We offer a wide range of products and services to meet the needs of our clients. Our products are designed to be easy to use and to provide a high level of security. We also offer a range of services to help our clients get the most out of their software. Our services include installation, training, and ongoing support. We are committed to providing the highest quality products and services to our clients.





# MICROTEK II COLOUR SCANNER

At Microtek, we're making it easier for you to scan your documents. With a 100-line resolution, 1700 x 1700.

**\$599.99**

WE OFFER SUPPORT, SERVICE, QUALITY & SAVINGS!

## DUAL SPEED CD-ROM DRIVE

At Microtek, we're making it easier for you to scan your documents. With a 100-line resolution, 1700 x 1700.

**\$249.99**

## IBM XT POPULAR PRINTER

At Microtek, we're making it easier for you to scan your documents. With a 100-line resolution, 1700 x 1700.

**\$449.99**

# MAGINTOSH SOLUTION CENTRE

Software, Hardware, and Accessories

<p><b>Hard Conversion</b> \$18000</p> <p><b>Black &amp; White Scan</b> \$9.99</p> <p><b>Optical Scanning</b> T-ALL</p> <p><b>WORLD'S FASTEST</b> \$1599.99</p> <p><b>LASERPRINTS</b> \$1299.99</p>	<p><b>CD-ROM RECORDING</b></p> <p><b>NEW OVER</b></p> <p><b>\$69.99</b></p> <p><b>\$14.99</b></p>
--	---

## TOMORROW'S GRAPHICS INC.

1015 Langway, Vancouver, BC V6B 5M1  
Phone: (604) 433-6433 • Fax: (604) 433-7087

# Stunning Color From Phaser 340

BY CHRIS FISHER



**Product: Tektronix Phaser 340**  
Size: 18x18 in.  
Price: \$4,100 for base model; \$5,100 as tested

## Hot Win

The Phaser 340 is a color thermal printer that produces 300 x 300 dpi output at four pages per minute to full color with its standard 1/8 in. of RAM. If you can spare the time for a 24-hour upgrade, the 340 can achieve print resolutions of 600 x 600 dpi.

Many reviews of printers based on this technology will explain that the output scratches easily and has a tendency to melt in the heat. We give the output from the Phaser 340 a solid A of printing and found that these are relatively minor points. In order to take off its scratchy, pebbled page, we easily had to get quite meticulous. We took one of our reference pages of art and placed it in a can as the melting Celsius constant heat by four hours. This seemed to have no impact on the output. Trying to remove the output using thumb and forefinger as it came out of the area also proved fruitless. The quality of the print, both graphic and text, from the Phaser 340 with all the options added is pleasing. Chris Hayward and Chuck Givens' Christmas marketing people informed us that the unit sold in the US is even viable, but neither would demonstrate.

The price is a very low network that between PC, Mac and UNIX installations, is all protocols are simultaneously active. The Phaser 340 breaks a barrier for color printing, at 15 cents a page for five percent coverage and about five cents a page for black and white at five percent coverage. The printer also has a sleep mode that pages that it uses even the cheapest paper we could find produced great looking output.

Control and maintenance of the printer is simple as the printer has been clearly designed with the user in mind. It runs a 2.5 MHz RISC processor, has Adobe Level 1 Post Script, HP-GL, PCL 3 and a 200 sheet capacity tray. The price of our test low is a mere \$4,100 for the standard version and \$5,100 for the printer as tested.

Do I have anything left to say about the Phaser 340? No. It is just quality. Other reviewers have tended to agree, and you need not look very far to find a convincing review of this printer. Just add this one to the pile. A.

Contact: Tektronix 800-444-5200 or 604-684-0000



## STUDENTS!!

Used computers are perfect for students -  
Low cost and they get the job done!  
**GIVE US A CALL!**

We carry an amazing variety!  
We'll help find a computer to match your needs  
and budget. Give us a call today!

**Ph. 241-8555**

We specialize in buying and selling  
previously owned computers.

**PC AUCTION**  
COMPUTER STORE

7930 Williams Road (at #3), Richmond, BC





# A CD for Your Pet Project

BY JEAN ALLEN JERSON

*It's raining cats and dogs on three new CDs. Between Microsoft's *Dogs* and Immix's *Interactive's Multimedia Dogs 2.0* and *Multimedia Cats*, domestic pets and wild kin come alive on video, descriptions and anecdotes.*



**Dogs**  
**From:** Microsoft  
**Price:** Approximately \$40

**Multimedia Dogs, Multimedia Cats**  
**From:** Immix Interactive  
**Price:** Approximately \$40 to \$50

There are a great many for anyone considering looking for a new family pet. All three contain information to aid you in selecting your ideal pet and such things as frequency, amount, timing, level, size or suitability for children. Then they analyze your answers and come up with a selection of breeds that should be the closest match.



The two CDs Immix Interactive allow you to learn all the intricacies that you are not interested in. They might only want to search for a working dog, if it goes with children. Immix's CDs, however, will not advise the "breed" button unless you have answered all the questions.

I mean yes, there can be some surprises. I said Immix's *Dogs* that I would like a medium-large dog, a companion rather than a working dog, that we live in the country were not contributors about doing extensive grooming and it should get along with other pets and children. The top choice was a Bloodhound. Another of the top choices suggested "breeding needed to a puppy as they tend to be aggressive." Even though I had mentioned that the dog should get along well with children. Oh well, our limited but well-informed puppy and too little. However, displayed only medium to large breeds. It is true that for those that are, however, doing and baby changes should all be copied from the book, so I suppose they were right on that score.

Multimedia *Dogs* "breeds" a Pointer. However, in the top choice dog for assistance dogs. Maybe we should consider a breed as a working dog.

These programs incorporate what quality CDs should be providing humans an answer to help quality breeds. The search is more for the ideal pet, but good, but not too much video and audio clips and photos and material. You could easily stop here spending an entire afternoon exploring Immix's *Dogs* because the "guides," facts and trivia are so entertaining.

All three programs are loaded with facts and photos for each breed from an extensive list. Immix's *Dogs* comes with a list of breeds for each breed in both the USA and Canada.

The three also allow you to search the globe and explore breeds by geographical area. I discovered in several previous Immix's dog that was thought to have been related to dog brought across the border.

Search by the entire inhabitants of the forest. I also found a wild dog that closely resembles a raccoon and is supposedly called a raccoon dog. I wonder if they do the same trick with the package at night.

**You could easily slip into spending an entire afternoon exploring Microsoft *Dogs* because the "guides," facts and trivia are so entertaining**

What to get around? Possible guests: three at each level, general health, parasites, and diseases are also covered. Some to more polished pet have been labeled too closely. It is helpful to know when to search for and use each in each breed before buying a puppy or kitten.

Cat and training are also relatively detailed and illustrated. These programs also provide the questions about general care and general information that should help you become a more enlightened and respectful pet owner.

Cat lovers will enjoy Immix's *Multimedia Cats* just as "breed" helps in that the best dog for you "cat" can provide a few pointers to exploring possible breeds. Over 50 domestic breeds and wild species are displayed with full-motion video and color photography. On my system, the photographic view is too grainy compared to Microsoft's *Dogs*. The real reason is that Immix's is terrible, providing information on evolution, anatomy, coat colors, buying a new cat, health, feeding, grooming, and training (you training cat?).



The video in you stay enjoy the games, such as "name that cat" and a cat breed quiz. Some concepts can show that program with the camera. It also includes the history of wild cats. This section on habitat, population status, and conservation and behavior would make an interesting material for a class to 12 year-old school may.

Immix's *Interactive's* also includes Immix's *Dogs*, from, House, Park, Aquatic, and Pocket Pets that all. As the title suggests, you can find out about the "other pets" including pet-friendly pets, exotics, and exotics.

A price-a-search function would be like a search and such. This site would be a bit. A traditional web had enough but when it is placed as guests in the period for my

husband to buy me for Christmas when I really was hoping for an exotic boat.

## Performance

Multimedia *Dogs* requires a 386 or better and runs under Windows 3.1. But Microsoft claims it runs best under Windows 95. It's true: it can run on a 486 D33-45 with 8 MB RAM and Windows 3.1. I also installed it on a new Apple Power Mac with 8 MB RAM and Windows 95. As for the software, under Windows 95, the program installed itself and loaded automatically. I like the installation but it seems that the kids will have to choose CDs before they use the computer all. Not handy with a six-year-old.

The Premium was a bit faster in some changes but the video was still grainy. The specs for Microsoft *Dogs* suggest you need 4 MB RAM, a CD-ROM drive, installed 800K and a mouse. The program and its data I needed to upgrade the audio video drive on my CD-ROM (the cost is \$4000) and the drive was upgraded a little over a year ago—some it costs the new "Vista" 800. However, the program and its smoothly and the process was fine. The new price is \$49.99.

Multimedia *Dogs 2.0* and *Multimedia Cats* are both Immix Interactive for distrib-

uted by Immix Interactive as an official label. Immix Interactive seems to be actively selling in the home and hobby label with three CDs and the recent acquisition of Immix's *Interactive's* and their family tree. Immix's *Interactive's* software is still in development to see what other titles are added to their home computing line-up.

These two CDs come with both Windows and Macintosh versions on the same CD, a video disc touch to launch on schools that cannot make up their mind which format to settle on. Immix's requirements for Windows are a 386, 8 MB RAM, 2MB color display, Windows 3.0 and a sound card. A note about this version of QuickTime: if you have a later version installed instead of looking to that, the program also you to remove old versions of QuickTime. To get around this, see QuickTime installation on the last installation screen if you have a later version. For Macintosh, you will need at least a 68040 CPU computer with 2MB color, 4MB RAM, 11-inch display, System 6.07 or higher and QuickTime 2.0. The new price is around \$49.99 each CD.

Contact Immix Interactive: 1-800-444-0600; Microsoft Canada: 1-800-585-5649.

are your  
 ideas larger  
 than standard sizes?

- Print sizes to 3' by 5' (five sizes in 8.5x11)
- Inkjet output with PANTONE® licensed colours.
- PostScript Level II™ raster image processing

For more info call Arden at 608-8941  
 329 West Hastings St. Vancouver B.C. V6E 1H6



# Digital Photographs as a Way of Life

BY ADAM C. ENGST



There's a pretty significant part of Apple's QuickTake 150 digital camera and its probably the Apple device that's most affected as much the PowerBooks 160 line (which it's analogous with this, by the way).

The QuickTake 150 takes video 14 in 32 pictures, depending on whether you shoot in high or low resolution. You can switch between resolutions on a per picture basis, but we're not on using only the high resolution setting. The not quite new (and the nearest is singularly successful on this count, as it is so much technical success) what the difference between high and low results, too it, since both claim to be 640 by 480 and 24-bit color. I suspect the difference is in the level of image compression processed within the camera. For product information visit

various comments at our high school news site (http://www.csc.k12.ca.us) you can see it in more interesting and subtle ways because it's digital. The camera's main camera make video when the film winds, but the QuickTake apart from a low disk gives almost no indication that you're taking a picture (assuming it's bright enough that the disk doesn't kick in). Add this to the fact that you can crop and magnify images as Photoshop (the only the QuickTake 150 — and you realize that you can move only the picture from the top or holding the camera in a straight position in which you cannot see through the viewfinder. So, you might cover the subject in the final body but if you get it at all you can fix the image later. It takes for those interesting pictures of people who aren't expecting to be photographed, although the quality on motion doesn't look good.

Once you're become accustomed to the instant freedom of taking pictures whenever you want, you start to realize how much additional freedom you're afforded by having the images in digital form. For instance, you can attach the images to e-mail and send them to friends and family. You can put them up on a personal Web page, or you can only with them and then link to the Internet Explorer or Netscape that connects again about how many over the domestic desktop industry. Physical photos are a pain to duplicate, and you probably wouldn't get more than two copies of any standard image. But, of course, you can make as many copies of digital images as you want, which makes it easy to share them. More widely. And each PowerBook is highly capable, anyone who knows AppleBooks or PowerBooks at all will realize what images that let you view images like Photoshop (which I'll add here) in an appropriate format and either attach them to e-mail or as a mail message or create a simple Web page using the options you can add to each image.

So, to the quality you'll see in the images from the QuickTake 150 won't hold a candle to a 35 mm camera (and a quarter of the price). But you can make up for a fair number of the quality issues with the editing capabilities in Photoshop. But Photoshop is not a mere camera, and it's not an option, the flexibility and freedom afforded you by having the images in digital format is well worth the trade-off. Of course, the quality may make it impossible even there, so even if you don't feel the 150 is sufficient for your needs, how long can it be before Apple or another company makes the technology really will support work with as easily with higher quality images?

What's made the difference with the QuickTake over the previous camera we've covered is that there's little or no penalty in shooting a bad picture with the QuickTake. Perhaps the only thing to correct yourself with is the number of pictures left at any given time. When we went to a friend's wedding several weeks ago, we asked the captain (and by simply bringing a PowerBook and the usual cable necessary to download the pictures from the camera to the PowerBook's hard disk. Downloading the pictures is for a computer person probably easy and later that evening or the day of the next computer qualification.

There's a real trade-off, even you've bought the 250 (the 150 is for about \$1,000 in Canada) — 150 QuickTake camera (which isn't cheap, especially considering the low-quality output) you only receive exposure will be better and the 150 (which is the camera) will take with the QuickTake 150 have had the camera's limited image with an indication of being lost. You can keep a lot of film and developing for the difference to get between the QuickTake and a point-and-shoot camera, but if you take many pictures, the QuickTake will eventually win out. And, if you're like us, it always takes so long to get a roll of film developed that you forget some of the details of what was going on when you took the picture. We were about two weeks (200 pictures) in the last night (which was our regular camera, and we would have had a fairly good one) or so before that came out (which was a digital image, a simple day to the film) when that picture arrived.

Although the physical dimensions of the camera make it a convenient place to look for a few high-end features and general

## Object Desktop

Keyboard (from page 43)

**6 Object Archive** — The total contents of the desktop can now be undisturbed. Any 128,000 128 or 400,000 file is now a folder. You can open it, drag stuff out, drag stuff in, even run programs or edit files. Some windows the window's appearance is copied so that you can drag and drop windows, drag them to a desktop and then they disappear the files you want compressed into them.

**7 Keyboard Launchpad** — This is pretty straightforward. You can assign key combinations to open programs you use a lot. Configuring the keyboard launchpad is great. — open the settings and then dragging apps into it. Experimenters are fairly simple, click in the entry field and press the key combination that will launch the app.

**8 Tab Launchpad** — This is my current favorite. The original launchpad was good, but the Tab Launchpad is a good idea, does a better. This launchpad takes up less space and also provides organization. From the settings, you can add all the tabs you like. Each of these tabs corresponds to a row (or column) of icons. So I can make a tab Icons, click on that tab to bring it to the front, and then drag icons into it. Some icons are so common that you always want them available (like Find, Show Desktop, and



The Object Navigator is a WYSIWYG, as well as you can drag icons back to the desktop or other objects.

Look up the old launchpad. The Tab Launchpad lets you select which objects should always be available. One last feature that really sticks with the Tab Launchpad is the "stack" tab. If you like, all minimized apps can be made to appear on this tab, so well there is a tabbing feature that lets to browse the entire desktop after you launch an app from the Launchpad. This is a real problem if you are frequently switching between minimized apps.

There are many other enhancements provided by Object Desktop and I understand that there may be even more features on the way before OS 9 becomes available at the end of September. ☐

Current: QuickTake 150 (Apple Systems Group, MI USA)

http://www.apple.com/quicktake/

# Mac Station

## November Modem Madness!

### Supra Express Modem Specials

**28,800 Baud v.34 Express Fax Modem \$279**

**14,400 Baud Express Fax Modem \$149**

Outside Vancouver call toll free: 1-800-563-MACS  
We are Authorized to ship Apple products throughout Canada!

For orders shipped to you by express and handling charges in full.

22855 Lougheed Highway, Maple Ridge  
466-0190 / Fax: 466-0154  
email: sales@macstation.com  
Web: http://www.macstation.com

Authorized Dealer

Copyright 1996-1998 Adam C. Engst  
Information: adam@engst.com  
Comments: adam@engst.com



A lot of people ask me what I use to create PDFs pages "Windows Notepad," I tell them. They usually get a confused look on their face. Page it's their back to Internet applications.

Neopop is never out of state. When state filled, standards raise and I still have to approach my software Neopop just period along and keep in month that last learning from in use. Still, effectively takes some time, but to short learning, how to use many of these new digital technologies.

I previously looked at two different HTML authoring tools for Windows: InRoads Speller (<http://www.inroads.com/usa>) and Quatrogluk WinAuthor. Each takes a very different philosophical approach to assembling internet code.

The product is designed to keep you within a very rigid framework, but this isn't always a disadvantage. For those who don't know how Web pages are constructed, Spado's attention to structure keeps you from breaking the rules.

While the editor does give you a rough idea of how the document is going to look, it is not a true representation of the final HTML page as it will look on the Web. In order to see that, you need to click on the preview button, which loads the dedicated Internet browser (which does not support Netscape 1.1 screenshots).

There are a few other things I didn't like about *Topical*. It gave the color palette wrong

By the time you've mastered these packages you might, as well have mastered sailing (HTM), by hand. It probably takes the same amount of time now to surf the Internet as it used to take to surf the ocean.

Spider allows you to drag HTML elements from the palette, and then edit their attributes by right-clicking on the item as it appears in the editor window. A form pops up and displays just about every option available for that item. While this is handy

Within 10 days certainly there is lot of business, I give it credit like the past January. Before the

**Quantardeck WebAuthor** (11/95) is an add-on for Microsoft Word 6.0, which claims that if you know how to use Word, getting used to HTML is pretty simple. I like Quantardeck's approach much better than that of InComm.net. They're taking a product that is already well-known and InComm-packed and adapting it to a new application.

WebCollator gives you a more modern WYSIWYG interface and allows you to insert a document the same way you'd naturally insert one with a word processor. Things are a little more complicated when it comes to dropping in an image. A dialog asks you to fill in some information about how the image is to appear on your Web page. It's still pretty straightforward to use, even for Web novices.

Editing text with **highlight** is pretty simple. Instead of selecting text and doing things like changing them color, you just click a list of **HTM** tag options, such as selecting border styling, text size and color. Available choices are bold and italic.

Like most other editors on the market, it lacks the Metasploit 1.3.114: 10 exploit modules but a patch is to ship soon which restores its position there downwards. (C)

# INFOSERVE

***At Infoserve We mean Business - No extra charge for business accounts!***

No inflated "free time" claims. No hidden charges.  
No month-long wait-times. No "on line" queues.

**Up to 62 hrs/mth - \$12.50/mth\***  
2hrs/day free access time  
Choice of slip/terminal access  
No set up fee!

Additional online time: \$ .80/hr

All memberships include access to the best BRS in town!

\*Based on annual membership, plus taxes.

To find out more about Induserve's services and receive details by fax, call 482-8222 (24hr), and enter 5300.

[illegible]

1000



**Put your business  
on the internet for**

**\$10/mth**

One of the largest home page projects in

**Your business deserves maximum exposure.  
Come and join Infoterve!**

**We offer complete home page services from start to finish**

OFFICE: 482-8238 SIGN UP LINE: 482-8220

major drawback for WebAuthor at the moment is a complete lack of JPEG file support, meaning you're forced to use GIF images only. Disappointing, but the price will fix that in time.

WebAuthor is a fairly solid tool worth picking up if you are already an owner of MS Word 4.0 for Windows.

# WebAuthor gives you a more realistic WYSIWYG interface and allows you to build a document the same way you'd naturally build one with a word processor

## Now Your Web Site Will Look Like WebSite 95X

Building your own Web site used to mean knowing HTML. But recently released Web software for Microsoft Windows like WebPage, and Windows NT users you can use shared web capabilities to get started at your company intranet web.

The web now something called HTTP (Hypertext Transfer Protocol) to send Web pages over the Internet. Browser software, such as Netscape and Mosaic, can HTTP clients, meaning they are usually on the receiving end of a network arrangement. In order to send Web pages to other people you need HTTP server software, which is exactly what these packages do.

Once the software is running, there isn't

much you need to do, aside from authoring the HTML pages themselves.

Once users pick up quickly in the web world and only come to help more computer experts to help you. In fact, this is called a shared process. An HTTP daemon is constantly referred to simply as running.

Having Web software running on your machine is one thing; connecting it up to the Internet is another. In order to talk to the Internet, your machine needs an Internet Protocol (TCP/IP) network driver. Configuring TCP/IP can be pretty tricky if you don't have much about networks. The silver piece of the puzzle is a physical device to connect to the Web. This can be something as simple as a modem, which is usually the way for most consumer-grade applications, or something better like an ISDN or T1 line.

Once you have all that in place, you need to find an Internet service provider that will take you up, letting all this up can be pretty tricky and it something you probably want to hire a consultant to do or to make special arrangements with your provider to do for you. It can get expensive.

Installing and running the Web server software is a pretty simple and something you can probably do yourself. Most software installs let the other applications — it simply asks you where you want to install the data files. It's highly suggested that you simply accept the defaults. A standard trap is words starting lowercase.

For Windows 9.5 or 4.11, Quantum's WebSite 95X (95X95) comes with everything you need, including a TCP/IP stack. You really need a device like that with a T1 or ISDN to be designed, as long as you don't regret to be

connecting like FrontPage or the same time. While Quantum's WebSite 95X is not just one of the market, it does include many of the features you get in high-end packages, such as the ability to use external programs through CGI scripting, server extensions, and scalable image map support. WebSite 95X can handle 16 simultaneous connections and up to 20,000 requests per hour. <http://www.quantum.com>.

I've received higher traffic; you may want to put a little more power behind your site. For Windows NT there are two contenders: WebSite from Compaq and Associates, and Netscape Server.

The Compaq WebSite package is very similar to Quantum's WebSite 95X. It allows many of the same configuration options and is also compatible with the same CGI scripts. It sells for \$229.95.

Netscape, on the other hand, handles many more advanced features, such as server data encryption and better multi-threading performance. It comes in two flavors, Netscape Communications Server, which does not include server encryption capabilities (NSCSP) and Netscape Communications Server (NSCSP) which does.

If you're in the Macintosh persuasion, the premier package is probably the WebSite for Macintosh Technologies. This Macintosh package provides complete System 7 and at least a full 32M (must get 640K) of memory per hour. It's an entry level product. It's a full price at \$249.95. <http://www.northern.com>.

## Internet Server Costs

No it's not you, the Internet is getting down. The number of users making online and the types of applications being used are bringing the Web to its knees.

Once upon a time, most of the Web traffic

was text, mail, images and Internet relay chat (IRC). Now there are big demands from video users that need multimedia capabilities. Instead of receiving an average of 10-20 per second per week, traffic for the average Web site can now top 3000 per day. High-resolution images (GIF, JPEG) along with audio clips, video, and bandwidth. Even on bandwidth like there is no connection, and there's no real in sight. The minimum minimum? 750Kb/s.

The Internet place, being listed in the next letter applications may actually be listed in the Web tool. Here's how it works: if you have an on-line-capable machine, you can record and send messages to almost and later in any non-fully-equipped user on the Web. This is really slow like an Internet browser than a phone. And the time in the server. Developers are working on some on-line applications or this network. I hope I haven't mentioned that it's not really updating and downloading a file simultaneously in fact it you cannot wait just that by that a million in to users and up the scale.

What does it all mean? Well, either the net is going to come to a crawl, or everyone that is not Hong Kong and Belgium and Melbourne is lost, as the big Internet Center are going to have to spend big bucks to upgrade their networks.

If you're ever dealt with a big order of hard, you know what that they're too long looking up you the end and can easily be lost. Internet providers to stop long enough to notice that they're not out of bandwidth. Grrrr.

Need insight all the long distance calls you want to make for just a fraction of cost, (400-800-8000), there isn't as such thing as a free lunch. We can expect paper-based to be the next to come up with some new and cool new. Just daily everything because time doesn't stop and the effect the server is running, aren't it? G

# ISDN INTERNET ACCESS NOW!

## Millennia Net Inc.

Millennia Net is a Networking & Software design company with the technology of the Internet providing digital local & wide area networking solutions. Access to our network ranges from 64Kbps to 1.544 Mbps over ISDN and T1 lines. These digital connections provide our clients with lightning fast Internet access and near instantaneous response times.

Millennia Net will be closely with your telephony company to ensure a smooth transition to fully digital communications. Integrated Services Digital Network (ISDN).

## CALL US TODAY!

### ISDN enables Millennia to deliver:

- High Speed File Transfer
- Enhanced e-Work & Data Transmission
- Video Conferencing
- Online CD-ROM Publishing
- Remote Back-up
- Telemedicine Applications
- Web Area Network Services
- Networked Multimedia

### Also Available:

- Virtual Services
- Interface Design
- Multiplatform Systems Integration
- Center to Software Development

## MILLENNIA.NET INC.

Telephone: 800-648-2298  
Web Site: <http://www.millennia.net/>

Please note our new phone number!

ISDN is a quantum leap beyond modem technology. To support this leap in bandwidth, our modem technology now have installed multiple fiber optic links to the Internet. We are committed to our clients needs for consistent, great bandwidth and will increase our bandwidth as the nature speed of the Internet.

192764026

ISDN Dial Up Accounts NOW AVAILABLE!

33% OFF



# THIS YEAR

Internet access from MIND LINK<sup>®</sup> opens up  
a new world of knowledge and adventure

# GIVE THEM

Surf the Web. Send e-mail in a flash.  
Download software. All in one convenient package

# THE WORLD<sup>®</sup>

Give them a gift they'll really use  
At a price you'll really like. (Starting at \$10<sup>00</sup>)

<sup>®</sup>...AND WE'LL GIVE YOU A FREE MUG (offer open to MIND LINK<sup>®</sup> members only)



## MIND LINK!

phone	668 5000
fax	668 5028
e-mail	<a href="mailto:info@mindlink.net">info@mindlink.net</a>
web	<a href="http://www.mindlink.net">http://www.mindlink.net</a>

Quality Internet Access & Support. Since 1996.

## Librarians of the Future

Continued from page 32

Information Highway, many business have found a need for their own in-house or part-time cybernauts, if for no other reason than to soothe their computer phobias.

No matter the reason that information is needed, most small and midsized companies are finding they need assistance to handle this task. This is usually business most managers, who need the informa-

tion the most, do not have the time to seek and build an inventory of useful sites and find the information that they need.

I caught up with Lenna Perez, a real-time cybernaut at the InfoCenter (in which is located in Woodstock, New Brunswick). The site has dozens of interesting topics, including Child First Canada, as well as listings of potential interest to people in New Brunswick.

Lenna holds a Masters degree in Library and Information Science from the University of Western Ontario. She can be

reached at [lenna@infocentre.ca](mailto:lenna@infocentre.ca), but can also be reached at 1-800-433-1100 or 1-800-547-6288. If you visit her Web home page, you will see her photo and see that cybernauts can not choose placed into business from the future.

I spoke via e-mail, of course, with Lenna Perez.

**Marie Wilmann:** What is your primary function as a cybernaut?

**Lenna Perez:** My primary function is to locate information for clients or members of the company and give the Internet or commercial online details. I think your work information located in a quite accurate.

### Web Inquiries

- Individuals request from businesses and individuals
- Locating competitive information for use by the company
- Background research and online presentation of clients who are on our Web server.

**AW:** What percentage of your work do you find deals with client presentation?

**LP:** I would estimate at least 50 percent and growing. I'm always finding out search engines and other places to promote our clients' Web sites. A lot of the time is spent locating the most appropriate category in a directory such as Yahoo.

**AW:** How do you typically promote a company online?

**LP:** At the design stage I typically do some research to see what similar sites my client and where they are located in directories or indexes. Once the site is ready, we write a brief press release or press kit and post it in the appropriate newsgroups mailing lists, search engines (i.e., Lycos, etc.), subject directories, and WebTV. These pages that promote is very important to Web sites. Regardless of a site's value, it is at little use if it cannot be easily located.

**AW:** What area of the Internet do you find you use the most to find information for your clients?

**LP:** I would have to say that I use the Web most often, primarily because of the Web design we do for clients. For most general requests I use the Web heavily first as it is the fastest growing portion of the Internet. Google.com as I often find the information out-of-date on much web pages, as well as design and marketing sites. On occasion, I may check across a Web site with a contact name and send a request by e-mail to see if he or she can supply more information. Other sources include library catalogs and periodical databases.

**AW:** Is there such a thing as a common question you receive?

**LP:** Not really, we've done some consulting for national organizations that want to get their offices on the Internet so I'm often updating my list of Canadian ISPs (Internet Service Providers).

**AW:** When is the latest information request you have received?

**LP:** One client wanted a fully comprehensive list of Canadian companies that design and host Web pages, with contact and pricing information (finding the companies wasn't difficult, but locating their list of services and pricing information [when email sites] took a while. [Do you realize that some companies didn't have contact information on their pages?] How very useful that the client who didn't have Web access.)



The Future of  
Interactive Entertainment

## More than just an Internet provider!

ICE Online is an entertainment and information network with over 80 local dial-up lines for easy connection. We specialize in multiplayer games, designed and produced exclusively by ICE.

Check out our ICE Coffee Cafe at 92-1635 56 Street, Burnaby, BC. You can cruise the Net while relaxing with a mug of your favorite hot java.

## Exciting Online Multiplayer Games!

Need some stress relief? Want to meet new friends? We have the perfect solution. ICE Online's suite of multiplayer games!

The **Major Realms** rich fantasy world allows you to explore uncharted territories, battle villains and monsters, or simply sit in a tavern over a tall drink and chat with others.

Test your mettle in combat with **Cybermenace: Space Station Shootout**, a futuristic paint-ball style game set in a state-of-the-art 3D rendered world.



## Accounts from \$17 per month!

World Wide Web, SLIP, PPP, E-Mail, Telnet, Gopher, FTP, Full Internet Newsfeeds, IRC, Sympa Newsfeeds, Unix Accounts, and MORE!

Vancouver:	14400	482-7590
	28800	482-7547
Victoria:	14400	480-1327
Customer Support:		482-7575
Fax:		482-7569

<http://www.iceonline.com>

Over 400 hours FREE Internet access per month!

- Free Web Pages
- Free Trial Accounts
- SLIP install packages available

# UNLIMITED INTERNET

# \$19.50

FREE  
Web  
Page



FREE  
Web  
Page

GET ON THE

# INFO HIGHWAY *NOW*

- ✓ NO Setup Fee
- ✓ Direct Unlimited Access
- ✓ No Hourly Charges
- ✓ Free Access Software
- ✓ Free Technical Support
- ✓ Personal E-Mail Address

## 654-6088

\*some restrictions may apply



Internet Gateway Corp.

# Librarians of the Future

Continued from page 94

**AW:** Do you find that your customers are preoccupied with the status of their computers' presence on the Internet?

**LP:** No. Not as much as they should be. Some businesses still see barriers to the Internet (e.g., cost of hardware, cost of access, learning curve) despite the fact that their competition may already have a presence online. This uptick in help-seeking indicates an understanding of the Internet for local businesses. I think once they have the opportunity to see the capabilities for themselves, they may realize its potential.

**AW:** What is the primary type of research you conduct and the what

type of computer? **LP:** In terms of individual requests, many companies request a copy of "what's out there" that may be related to their type of business. In many cases these businesses don't

yet have Internet access of their own, so the results may help justify the decision to purchase access. I would estimate that many of these requests are small local firms.

**AW:** What does a Cyberlaw typically charge?

**LP:** My rates range from \$45 to \$180 (Canadian) plus applicable taxes.

perhaps the searching and formatting involved. The rate depends on the volume of work and the urgency of the information. Additional charges may occur for expedite, and with some commercial services, there are extra charges that may be required.

**AW:** Could you categorize for us the types of businesses that you find most often require the use of a Cyberlaw and for what purposes?

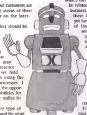
**LP:** I've done a number of searches for government departments, which they required information for permit-taking or for the decision-making purposes (e.g., whether or not to proceed with a particular program). I've done research for insurance companies, telephone companies, manufacturing, public utilities, hotels, nonprofit organizations. The businesses, individual and organizations that have purchased my Web services, range from the Chamber of Commerce to music groups. They like the fact that I can put together a list of links to other sites with related

information, as well as the protection of their site.

**AW:** What do you like and dislike about being a Cyberlaw in response to a non-traditional librarian in a book-filled environment?

**LP:** I like the fact that the Internet is constantly changing and evolving. It's all I can do to keep up on all the new sites, software, etc. Managing the Internet can be a challenge, since there is no absolute list of its resources, but the tools and techniques have improved significantly. I can't say I dislike anything, which wouldn't leave us with the rest all day (and get paid)! I'm also enjoying to being (in the most part) a telecommuter and working from home. I missed the daily interaction with co-workers at first, but there are lots of benefits.

**AW:** Since most of the communication and transfer of my results is done electronically, I rarely meet my clients face-to-face. Is



## INTERNET ACCESS

Just  
\$16<sup>95</sup>/mo or less

All the time you'll ever need.  
(Some restrictions apply)

Call **257-9400**  
We'll connect you.  
TODAY!

We're proud  
Sponsors of:



UNIVERSITY OF NORTH CAROLINA  
at Charlotte  
www.unc.edu



INTERNET  
PORTAL

Phone: 257-9400  
Fax: 257-9400

HighSpeedData  
Paper: www.papers.com

## NetBlazer<sup>®</sup> LS

FAMILY OF PRODUCTS



**ZED**

TELECOMMUNICATIONS  
(604) 473-9331  
http://www.zed.ca

- 10/100 Mbps Ethernet, 10/100 Mbps Fast Ethernet, 10/100 Mbps Gigabit Ethernet
- 10/100 Mbps Ethernet, 10/100 Mbps Fast Ethernet, 10/100 Mbps Gigabit Ethernet
- 10/100 Mbps Ethernet, 10/100 Mbps Fast Ethernet, 10/100 Mbps Gigabit Ethernet

TELENET

**ZED** TELECOMMUNICATIONS  
TELEPHONE 24/7  
(604) 473-9331

- 10/100 Mbps LAN networking via on-board or external ports
- Up to 100 Mbps throughput
- 100% 24/7 customer support

10/100

# Canadian Anagrams on the Internet

BY JOHN ROBERT COLEMAN

I assume readers are familiar with the Internet and the World Wide Web, but there might be readers who are unfamiliar with the word anagrams. A popular form of word play, an anagram is made when the letters that form one word are rearranged to create a new word. The original word and the anagram may be short or long, one word or a number of words in length, but each one gives an equal twist.

One of the great joys of using the Internet is discovering things that are both novel and useful. The other day I made just such a two-fold discovery on the Internet's World Wide Web. My discovery is called The WWW Anagram Generator.

When a word is important is that the meaning of the new word or words sheds some light on the meaning of the old word or words. When that happens, the anagram takes on the air of the acronym. It yields a message that seems mysterious, even sinister. Anagrams infiltrate us with the familiar. A case in point is one of the most intriguing of anagrams, the word anagram itself. Decomposed, its letters spell out the words AMI MAIUMA, Latin for great art.

When I turned on the computer and began to enter the Internet, I had no idea there was an anagram generator lurking among the hundreds of thousands of sites across that are accessible through the World Wide Web.

The WWW Anagram Generator (an abbreviation is <http://www.ada.net/~dave/comp/word/wwanagram.htm>) produces a page on the screen with a dialogue box that invites you to type in a word or phrase. Then you click the search key and within a few moments all the proposed permutations and combinations of those letters appear in the form of a list. It would take hours, even days, to investigate the list otherwise, but that the computer perfectly performs. Each anagram is called a list, and lists may range in number from none to thousands, depending on the length of the original word or words.

The anagram generator on the WWW is a free service introduced last year by Ed Baker, a student of computer science at the Virginia Tech, Blacksburg, Virginia. Because he is still an undergraduate, Baker lists his degree as B.S., Computer Science, May 1997. He produced the program "for people to play with." It is not a company's property. I would like to tell the day he got started.

His generator produces permutations and combinations and permits you to scroll list

by line, across by screen. Scrolled up by the possibilities inherent in his anagram generator, and looking to a nonacademic form of word play, I decided to experiment in the names of the provinces and territories as well as those

of some politicians of the day. All the while I wondered what would happen. Here on the surprising results.

When I typed in the words "Islands Canada," I got an astonishing number of

hits. 4,667. Most of the anagrams, although they are composed of everyday words, make no sense at all. But I found four of them. BECH BECH MATT BELL, which like it might

## Out of the box and... **ON TO THE NET IN MINUTES.**

With a Supra 28,500 bps Play and Play™ modem, Laura LaMarche was on the net in 3 1/2 minutes.\*

What does a teacher from Millis, Mass. know that you don't? Quite honestly, when it comes to installing a modem from Supra, there's not much to know. Because Supra's new Play and Play modems virtually install themselves. Which means no more fumbling through device manuals or time-consuming diagnostics. Whether you're running Windows 3.11 or Windows 95—the net can finally be yours at minimal cost. Just, how often PC World had to say about Supra's state-of-the-art modems? "The best of the best." *—PC World*

Supra's Play and Play modems are available in 14,400 and 28,500 bps versions. Call 1-800-727-3443 for more information.

While we welcome reviews like these, our primary goal is to impress real people like you. People like Laura LaMarche who are concerned as using online resources get started. To advance their careers. And to stay on top of today's rapidly changing communications. We make modems for PC users who want sophisticated communications without the usual set-up and configuration hassle.

If you want to be on the net in minutes without the hassle, go to the location with one Play and Play installation. Call 1-800-727-3443. Or the Supra website online too.



Whether you're looking to get on the Internet by the first time or upgrade to the best performance in the industry, Supra has the right modem for you. From Supra's Single Instance which includes a Supra 28,500 bps Modem and Supra Modem™ software, to a version of Play and Play Modem with the latest operational features you and want—only Supra makes it simple.



**Supra Single Instance™** 28,500 bps  
Full featured, high-speed Modem  
Includes 28,500 bps Play and Play software



**Supra Play and Play™** 28,500 bps  
Complete Internet solution  
Includes 28,500 bps Play and Play software



**Supra Play and Play™** 14,400 bps  
Available high-speed Modem  
Includes 14,400 bps Play and Play software



\*Requires the installation of Windows 95 or an installed Internet web browser (Netscape).



**Supra Corporation**  
Communications Made Simple™

Everett kids followed the hypochondria of Mianthra. The most appropriate ones are BAHN KHAH (perhaps a nod to the myth of the vessel its symbol at the Maritime Museum of War and Navy) and BAHN-KHAH (possibly a nod to one of the province's southern districts). Gasta produced a dozen hits, including BAHN TARA, BAHN TONG and BAHN TAO. (Is the latter from New Age jargon? Curiously, the magazine goes on to list not just the text of all the previous winners, BUT ALSO to believe to do so itself.

Here are the five best programs I found for our major places. Some of them make many others are really mysterious. (The number is parentheses refers to the

Hamilton (NY) HARRY WATTS, THOMAS  
Brewster (IL) RYAN HICK, THOMAS  
Lambert (IL) COLBY  
Infrared (IL) MICHAEL SELL, BILL  
Crawford (NY) NICK

Unfortunately the following place names yielded no hits: Orizaba, Quetzaltenango, Huehuetenango, Huehuetla, and de John's. No words or phrases could be made with them. Perhaps they yield meanings using a French language Anagrams Generator. Or perhaps the clues should be revised all.

— John Albert Colombo

<p>Informanet's</p> <h1>Dial-A-File</h1> <h2>BBS</h2>	<p>Memberships from \$45/year</p> <p><i>Free access also available</i></p>
<p><i>Full</i></p> <h1>Internet</h1> <p><i>Access Available !</i></p>	<ul style="list-style-type: none"> <li>★ Email</li> <li>★ FTP</li> <li>★ Telnet</li> <li>★ IRC (Internet Chat)</li> <li>★ World Wide Web</li> <li>★ Slip Connections</li> </ul>
<p>For business and pleasure, DAF is the place to 'get connected' to the online world</p> <p>Through DAF's easy-to-use menu system access the Internet, or our massive software library, global email services, online games, daily news services, and much more.</p>	
<p>Information &amp; Tech Support 737-1999</p> <p>For access use your modem to call:</p> <p>735-FILE (14.4Kbps) 735-8888 (14.4Kbps) 735-2425 (14.4Kbps) 735-FILE (28.8Kbps)</p>	<p><a href="mailto:your.name@dafbbs.com">your.name@dafbbs.com</a></p> <p>Private Internet Email Address with each subscription!</p> <p>Online since 1993!</p>



# Wanna Buy A Planet?

## Internet!



Use point and click software to become a part of the world's greatest information resource. View postings at the Leavers, talk to far away friends, instantly send electronic mail anywhere in the world, order a CD, or battle it out with other players in interactive games.

The real measure of Internet speed is how much of your provider's bandwidth is actually allocated for your use. Infomatch offers one of the best user to bandwidth ratios in the country.

At Infomatch the emphasis is on usability, rather than converting more users than we can accommodate. We offer less than 20 to 1 user to modem ratios, T1 powered connectivity, three years of experience, and absolutely no unrealistic hype. Each account at Infomatch includes both PPP and Unix shell access, plus the ability to serve your own commercial web page for free.

*Call us today, or just log on as our guest and ask for a five day complimentary membership, and see the future for yourself!*

**infomatch**

INTERNET

**Office: 412-3230**  
**residents:**  
**412-3277 412-0411**  
**412-3555 412-3957**  
 Email: [don@infomatch.com](mailto:don@infomatch.com)  
[www.infomatch.com](http://www.infomatch.com)

No program at all was generated by Quikpic. (To be accurate, there was one in the exact QuikPic itself, which appeared in the window along with the following, just only unexplained explanation: "You had 1 file" in the future I will allow converse with some in a French-language program appears to deal with Quikpic)

[illegible]

I entered the name Tredura but received the following standard message: "Sorry, I couldn't find an address for Tredura."

help David identify some of the word "failments" that he produced using anagrams, including **FOUR** and **FOUR** **FOUR** (4).

**John Robert Colombo**, the author of many books about Canada, is the general editor of *The Canadian Global Almanac* (Montreal). For his article from the new "Climate," see the end of our column in "A Lookback."

Instead of producing programs, Prince Island Island gave me the following message: "There are too many people and programs to estimate all in the island time zone." When I implemented the abbreviation P.I.I. I had to send for advice of P.I.

Since his arrival from keyboarding New Brunswick, the two most appropriate new apps are **CRM**™ **WMS** **ERP** (various goods) and **CRM**™ **WMS** **ERP** (various items). New items granted 35 hits, including **CRM**, **IN** **TO** **MAC** (economically important) and **CRM** **CAN** **TOO** (economically like a commercial) for the well-known **CRM** **ERP**.

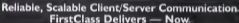
Waters (unbonded) Newbonded I was surprised to find that both all but two of them are wide of the mark. The only I like is the NEW AND FLOWERS and NEW AND FLOWERS I did not find the traditional images AND NO LEAFY FUN I believe either or not these words will never appear as motifs for the Coastland!

Tolson's history generated 461 hits, but only one of these records refers, at slightly different TOSR, 751 325 3129, I had a problem with Northwest Industries as I processed forms after return of loss, but I never saw how many because at the point when the system clocked 200,000 hits at information, my memory page 7510 character covered the state of affairs. Before that happened however, I managed to cover the program. WHATS HIS POINT REPORT AND WHATS POINT ABOUT BUT. You moral code, huh?

To complete the coverage of the country, I rebooked the name Canada, only to find it imprudent this time around. I listed the country's title "Government of Canada" and not the subject with 1 Excl. assignment. After such a weekend it is just as well that they are not mutually substitutable. Bought 1 Ex. from Dave at \$100. BOOBY AND DON MARRAS, PETER CAM MARRAS, PETER AND CAM MARRAS AND MARRAS.

Look we wish we wish the country's official motto (How are four of the 523 bits increased by the words Four for the few words) ARE PAIR (ARE TWO SOARS till NOT ARROW, and (what mysteriously NOT ARE ABOVE

I had a lot of fun with the names of political personalities. Quakers, Pennies, Squares, Partners will be pleased to know that all names may be incorporated in ways including AIAA, AIAA, AIAA, AIAA and AIAA. AIAA, AIAA, AIAA. How Quakers lead.



an early 19th-century illustration of a woman in a long dress and bonnet, standing next to a large, ornate, dark-colored cabinet or wardrobe. The woman is looking towards the camera. The cabinet has a large mirror on top and several drawers and doors below. The background is a plain, light-colored wall.

Other chemicals used regularly are still struggling with clean, green alternatives. Bellini's BioClean has offered the industrial strength alternative that also has

By the time they were 10, *Andropogon scoparius* could reach two-thirds the height of *Andropogon scoparius*. *Andropogon scoparius* was collected along with the native species, *Andropogon scoparius*, and *Andropogon scoparius*.

Addressable mail carrier (MPC)  
 secondary (less a single location)  
 Secondary distribution location  
 site and potential interest  
 (primary) for future global  
 communication, (MPC) possible  
 or collection site for mail, (MPC)  
 location and other facilities and  
 equipment, location and other

[illegible]

These have also often caused us to change our thinking about the relationship between the individual and the community, and about the nature of the social contract.

Finally, you also have access to our  
24-hour, toll-free customer support and  
unlimited free upgrades.  
Call today to learn more about  
Microsoft Dynamics.

[illegible]

**For more information, go to**

**For more information, go to**

[illegible]

# Lights! Camera! Log On!

*Virtual Film Festival Offers Film Pros And Fans An Online Forum*

BY JEFF EVANS

**A**t the annual Toronto Film Festival, new to its 30th year, you might expect to see the old media in all their glory: film stars, directors, bestselling movie

magazine with their entourage, bundles of newspaper writers and photographers. At this year's Festival Of Toronto, however, is one truly novel of the latter: *Film Festival*, a

Web glowing amongst the movie goers and casual stroller, poised to an experiment in which the info highway is being used to do as real and not around Hollywood.



The Virtual Film Festival, a tentatively designed World Wide Web page (<http://www.virtualfilm.com>), has been launched and unlike a film festival that is only on for a few days each year, this online festival hopes to run uninterrupted for the foreseeable future.

The Virtual Film Festival is a Web site created by filmmakers and film enthusiasts, founded to provide an ongoing virtual meeting place to evaluate film projects, do deals, whenever, possibly do research, and have film and video related fun.

When the Virtual Film Festival debuted at the Festival Of Toronto on September 8, it presented a very rich web interface with a lot of interesting places to go. Subtitled and run by Stephen Canada, the National Film Board and Heritage Canada, the site offers a lot of interesting things. Among them the VFF offers a lobby for visitors to get their bearings and choose a place to go: a screen to view film clips and trailers from current and upcoming films; a press center room center, including multimedia press center with news and interviews; forum room for discussion in particular topics; a call to filmmaker list, an online magazine; a connection stand where videos and other products can be ordered; a library; and an accredited media and industry room where one can pitch concepts and engage in conversations with other industry players.

VFF talked in Virtual Film Festival co-founder Steve Whitlock's January of the film *Moonstruck* (Comcast) from Chemistry and the *Movie* about the VFF. Whitlock stated that in the film and television business it is currently tight, there are few connections channels for film professionals to connect with and plan projects. Interestingly outside the control of the major media companies.

According to Whitlock, the VFF offers a free channel of communication between anyone interested in film and video production, anywhere in the world. Its aim is developing into a different system for making and promoting films. Although the VFF is intended to provide an alternative in the existing commercial filmmaking system, it is aware of the economic reality of paying its way and will attempt to get the most of operation through the commercial model advertising and professional media membership fees to the industry about the other areas of the VFF are all free otherwise (no fees unless) G

## GO WHERE THE SMART MONEY IS GOING.

<http://www.wimsey.com/>  
Selected as  
**BEST COMMERCIAL WEBSITE**  
by Canadian Internet Awards - 1995

**You'll Be In Good Company**

**With Our Growing List Of Satisfied Corporate Clients.**

A & B Sound  
B.C. Children's Hospital  
B.C. Transit  
B.C. Tel Mobility  
BCTV News  
Canacord Capital Corp.  
Capilano College  
The Computer Paper  
The Electric Mail Company  
Fletcher Challenge  
Group West Systems Ltd.  
Intrawest Corp.  
Loomis Courier

Microplex  
Molson Indy Vancouver  
Motorola Wireless  
Network Records  
Pacific Press  
Patriot Computer Corp.  
Reboot Productions  
Sedworld '95

Spectrum Signal Processing Inc.  
Sunnyhill Hospital  
U.T.V.  
Vancouver Stock Exchange  
Xillix Technologies Corp.

(partial client list)

**Wimsey Information Services Inc.**

*"Providing Internet Solutions Since 1986"*

Corporate Sales: (604) 287-1119

e-mail: [sales@wimsey.com](mailto:sales@wimsey.com)



# The Best Web Sites

Interview with Point Survey Authors

BY BETH SCHENGLI ROBERTS

Recently *The Computer Paper's* World Wide Web site (<http://www.tpcp.com>) was reviewed and selected as being in the Top Five list of all sites on the Web by the current, prestigious and overall quality by Point Survey: The Point Survey is a production of Point Communications, Inc. (<http://www.pointcom.com>) who have been compiling a "Best of the Web" list with about coverage of thousands of the Web's top sites.

Interviewed by this, we spoke to Chris Kline, the President of Point Communications, Inc. and Todd Whitney, their Director of Network Relations. Kline gave the following opinion just stated: "What their goals are and what they think of the future of the Internet."

**Q:** When did you get the idea of being the best Web site?

**A:** The reason Point came into existence was simply the overgrowth of "Network Issues" and the time-consuming difficulty in finding quality Web sites. Exploring dead ends, poor sites and so on is simply on a 7-11 site, but inevitable at 14-1 or 28-1.

**Q:** What do you believe you are trying to present with your rating system?

**A:** We are trying to promote the concept that the quality of a site is more impor-

tant than the volume of sites out on the Web.

**Q:** The award "Top Five Award" judges in 1995 after the start your criteria. Why the award?

**A:** In the early days we went through 1000s, which had the most content coming in the 1990 and found 40 percent didn't even connect, 50 percent were garbage sites, the percent were decent sites, but often duplicated a better site (was paragraph) or would do more's place. Content would be interesting in this point was the best of the Web.

**Q:** The best Web site recently voted a lot of commercial and non-commercial Web sites. What do you find you like making a "network" site?

**A:** We are sites on presentation, content and experience (the user look after visiting the site). First all sites must have top sites in all their content. It may help today sites do very well by supplying content or links that are not connected to other sites. It's hard to find a good balance between content and design. Computer is more and more Web don't think

there is a pattern, which all successful sites should follow. That could be too boring. The experience could be the most exciting feature in being able to track to a site. If the site can do good about going to a site, it will always be successful.

**Q:** Successful sites offer things people want to see in the Web. They capture people's imagination through compelling content, presentation or experience. They are also marketed well through newspapers, TV, and computer networks with other Web sites.

**Q:** What personally do you like most and the least about the Web sites you visit?

**A:** I like innovative sites that tell me something I didn't know before I went there and make me wonder how I got along for so long without knowing. Great graphics and presentation technical websites are less like at the end of the day you ask "what kind of tool and point-of-view does the site have?"

**Q:** Where do you think the power of the Internet lies?

**A:** Advertising, free to the user, is the future.

**Q:** In consumer and home use. Much of

the Web is geared toward PCs and networks. However that will change. We are trying to bring the Web to the user who doesn't spend hours and hours on the Web. This shows interesting and useful sites will become very big.

**A:** Also, people should keep things in check. For instance, I don't think the Web will ever replace a book. The time books will be replaced by the Web, but the number will be very small. The Web will only replace areas that are becoming obsolete. The Web will never replace a current paperback and so on. Most books are in a format about that thought, yes, they are too long selling future possibilities.

**Q:** How do you think new developments like Java programming language and HTML 3.0 will affect the Web?

**A:** It will provide another level of development to reach and control the content, the separation between sites that get lots of traffic and those that don't. Everyone will eventually have to have their Web site on television. All sites are now produced in video — in fact you don't even think about it any more. (A)

## Finally! Available November 1, 1995...

E-Z  
NET

E-Z Net Internet Services Ltd.

Point Survey  
also on E-Z Net

...Internet Access for the Best of us!

E-Z Net: Focused on the "Non-Expert"

Accounts from \$4.95/mo.

"No Daily Dignity" Policy

"E-Z Help" Phone Assistance

Complete "Housecall" Services

Multi-offer family Pricing and Parental Education

# Point Communications' Top Sites Hall of Fame

HTTP://WWW.POINTCOM.COM/TEXT/TOFPRITE/

## A Bunch WWW Museum

<http://www.abm.com/guide/museum.html>  
Content: 47 Presentation: 41 Experience: 43

## American Recordings

<http://americanrecordings.com/>  
Content: 45 Presentation: 47 Experience: 43

## America's Job Bank

<http://www.ajb.com/>  
Content: 46 Presentation: 36 Experience: 38

## Laurie Anderson's Green Room

<http://www.greenroom.com/RLA/Virtual.html>  
Content: 45 Presentation: 43 Experience: 45

## Apple Computer

<http://www.apple.com>  
Content: 42 Presentation: 43 Experience: 44

## Boston Pioneer

<http://www.bostonpioneer.com/>  
Content: 45 Presentation: 43 Experience: 43

## Book's Backs

<http://www.books.com/>  
Content: 44 Presentation: 37 Experience: 41

## Bonus Video Monologues

<http://www.bonus.com/>  
Content: 35 Presentation: 48 Experience: 37

## Busset

<http://www.buset.com/buses/>  
Content: 42 Presentation: 44 Experience: 44

## Cape Breton Historical Cookbook

<http://137.104.201.131/foodbooks/home.html>  
Content: 42 Presentation: 45 Experience: 43

## CRJ

<http://www.cri.com>  
Content: 39 Presentation: 44 Experience: 43

## Citizen

<http://www.citizen.com>  
Content: 47 Presentation: 40 Experience: 44

## City-Hot

<http://www.city-hot/>  
Content: 48 Presentation: 34 Experience: 44

## College and University Home Pages

<http://www.college.edu/2001/collegehome.html>  
Content: 47 Presentation: 43 Experience: 43

## Conqsta

<http://www.conqsta.com/conqsta/>  
Content: 35 Presentation: 44 Experience: 38

## Dejazz Research Service

<http://www.dejazz.com/>  
Content: 49 Presentation: 40 Experience: 43

## The Detroit News

<http://www.detroitnews.com/>  
Content: 45 Presentation: 44 Experience: 46

## Discovery Channel Online

<http://www.discovery.com> Content: 42 Pre-

sentation: 45 Experience: 45

## The Elixir Page

<http://elixer.elysium.com/topofthe.html>  
Content: 44 Presentation: 43 Experience: 43

## The Elements of Style

<http://www.elements.edu/elements/style/>  
Content: 45 Presentation: 35 Experience: 38

## Environmental Education Network

<http://environmental-education.net/>  
Content: 47 Presentation: 38 Experience: 40

## EPRI E-Source

<http://www.epri.com/epri.html>  
Content: 46 Presentation: 40 Experience: 47

## The E-phantom

<http://www.e-phantom.com>  
Content: 40 Presentation: 42 Experience: 43

## 50 Greatest Conspiracies of All Time

<http://www.whodunnit.com/50-conspires/>  
Content: 44 Presentation: 40 Experience: 43

## Jeany Garcia's Hot & Steamy Photos

<http://www.hotandsteamy.com/jeany.html>  
Content: 37 Presentation: 44 Experience: 43

## The Gopher!

<http://www.gopher.com/newsroompage.htm>  
Content: 47 Presentation: 44 Experience: 43

## Habitat

<http://www.habitat.com/2001/habitat.html>  
Content: 46 Presentation: 34 Experience: 42

## Japan InfoWeb

<http://japaninfo.com/japaninfo.html>  
Content: 46 Presentation: 43 Experience: 43

## Kali's Space

[http://space.brightnet.net/kali\\_space/](http://space.brightnet.net/kali_space/)  
Content: 43 Presentation: 43 Experience: 44

## The Legal Mail

<http://www.lgymail.com/TheLegalMail.html>  
Content: 47 Presentation: 30 Experience: 32

## Literary Links

<http://www.literarylinks.org/literarylinks.html>  
Content: 47 Presentation: 34 Experience: 44

## Lyrics: the Catalog of the Internet

<http://lyrics.cis.lsu.edu/>  
Content: 49 Presentation: 34 Experience: 43

## Madagascar

<http://www.madagascar.com/madagascar.html>  
Content: 45 Presentation: 42 Experience: 43

## My's Gaudin's Page

<http://www.ams.com/ams/ams/gaudin.html>  
Content: 46 Presentation: 37 Experience: 47

## Music City

<http://www.musiccity.com/musiccity.html>  
Content: 37 Presentation: 45 Experience: 34

## My Showbiz

<http://www.showbiz.com/showbiz.html>  
Content: 43 Presentation: 34 Experience: 43

## My Virtual Reference Desk

<http://www.vrtdesk.com/01/vrtdesk.html>  
Content: 45 Presentation: 30 Experience: 40

## Internet CANADA CORP

**\$19.95 - The power of  
the Net for 20 hrs/mo.,  
software included**

- Instant access, no extra hook-up or hidden charges
- National service with local dial-up
- Make us your E-Mail address
- Full service web site marketing
- Unlimited and yearly rates available
- 24 hour/7 days a week customer service

<http://www.ican.net>  
[sales@ican.net](mailto:sales@ican.net)

1-800-789-4226

## LYNX INTERNET

Only



**\$20.00 / month \***

Unlimited Access

24 Hr High-Speed  
SLIP and PPP dial-up  
Telnet  
FTP  
Uninet News  
Web Pages  
E-mail

No Hidden Charges  
No Maintenance Fees  
7x Access to the World  
Dedicated High-Speed Servers



Call us today for our

**Instant Account Activation !**  
**Put your business on LYNX Internet**

PHONE: (604) 231-2511 FAX: (604) 231-2522  
<http://www.lynx.bc.ca> [info@lynx.bc.ca](mailto:info@lynx.bc.ca)

\* \$20.00 incl. tax & reg. fee  
\*\* 24 hr. access 7 days a week

## ONLINE

**[Fotofinancier]**  
http://www.pedidosderua.com/finqjoc08m4aq  
gldtqjchaw/pedidosderua.html

**PhotoNet.**  
<http://www.wallpaper.com.au/photos/retro>  
 on line  
 Creative Commons Attribution 4.0 International License

**The Police is Right FAQ**  
<http://www1.illustration.com/illustrations/TFB/TFB.html>  
 Copyright © 2000 Illustration, Inc. All rights reserved.

**William Cragh**  
http://www.wcragh.com  
Chemistry, 200; Immunology, 200; Biochemistry, 200

**Thurs. Legislative Information on the Internet**  
<http://www.legis.state.nj.us>

**Tripod Travel Services**  
 1000 International Court

**Trojan Horse Coffee Machine**  
 India: Universal exports on job, facilities, facilities, India

 Does w

**The Topics**  
<http://www.guyana.com/transport/index.htm>  
 Content: All Transportation, 83 Experiences: 10  
 Issues: 0

http://www.publish.csiro.au/PT/PT/PT03030101/PT03030101.htm  
 (2003) *Journal of Polymer Science: Part A: Polymer Chemistry* 41: 1010-1018  
 Content 41: February 2003 42: September 2003

**The White House**

Coolest: 43° Fahrenheit 41° Fahrenheit: 43°

### Some Sample Reviews

Hydroxy- $\beta$ -keto acid along with other intermediates

**Count on September 11** September 11  
When you're ready to experience the  
colossal search event, don't wait a few  
hours. Not that 11pm isn't terrible  
alone. We're not kidding. We're not.

- Microsoft Mail?
- Lotus cc: Mail?
- Novell GroupWise?

- 
- THE  
ELECTRO-MECHANICAL CO.



**THE CD-ROM SPECIALTY STORE**  
145 West Broadway #72 • DOWD HBS 324 • 5774



LINUX Shareware Games

[illegible]

**Over 50 Titles in stock**

Campano's Easy 1990	\$20
Condors Easy 1990	\$20
Indepinto	\$24
Major Clinic Sports Month	\$24
Major Clinic Sports Feb	\$24
Major Clinic Sports Mar	\$24
Major Clinic Sports Apr	\$24

**MAC**

[illegible]

MON THURS 10 to 6  
FRIDAY 10-7  
SATURDAY 10-5:30





**VideoMaster 87000** — 8 new ports for multiple inputs and Premiere LE handled.

But even the Video-e 1.2 algorithm. One last noteworthy note is that audio information that comes from the source must enter in through a second card input and be compressed via software compression.

#### Testing Method

Tests were conducted on the state A/D system used with the video editing software (see accompanying article) and the video source was an Ikon Sony Handycam with composite output. Test shots were captured, with one setting at 75 frames per second and for other at 30 frames per second. Quality was set at 95 percent and frame size of 350x240 (4:3) and 350x240 was examined. The length of the clip was 30 seconds; frame capture was set at the minimum of 3.0s, 11 MB/s. When Undersampling found by AEI and Motion was considerable due to undersampling and undecoded raw images.

#### Product: miniVideo DC1

From: miniComputer Products Inc.

Price: \$699

The first board tested was miniVideo's DC1 equipped with C-Data's J-PG3 compression chip. It is the only board we tested that had two inputs and two outputs (composite and S-Video). It was a pleasure to install with no jumpers to worry about. It was configured as fullscreen and allowed for a possible 16:9D adjustment as well as line 180s and line 170A (frames), making it easy to find an available setting.

The board dropped absolutely no frames during the 15 frames per second capture test at our test. We found out the hard way that it is impossible to preview the video as it's being captured once you have a remote monitor. It also has no setting of 240x160. Our 30 fps test showed a drop of 500 frames at 350x240 and 0 frames at 350x240. All in

all, a good board with a few flaws. The key to this board is to set the quality down just a bit. The difference that is little as 15 percent makes it visible in the desaturated colored areas of dropped frames. The story is simple: set your video also make that board a good buy using the cost of a digital-to-analog converter. It cannot be used with Adobe Premiere LE for video editing.

Contact: mini Computer Products Inc.  
255 Commodore St., Palo Alto, California 94303  
(650) 349-6070

#### Product: Video Master 87000

From: Creative Labs  
Price: \$499.95

Creative Labs (famous for their Sound Blaster) provided us with their Video Master 87000 based on Intel's 730 chip. It has three composite and one S-Video input. It has three purposes, eight in total: for the first 100 frames and four for 180s. In the board, it took a long time to configure this board, even with the available jumper options. Like the previous board, it

cannot preview video being captured.

Aside from that, it captured basically a 14fps and started dropping massive amounts of frames at the 30fps setting. At 350x240 it dropped 500 frames, at 240x160 it dropped 217 frames, and 160 at 160x120 frame playing around revealed that using the capture ability in Adobe Premiere LE (that cannot be used to capture to history created a situation in which no frames were

Continued on page 127

# AVerMedia

## Computer to TV Freeze

### AverKeyII

Remote control, Zoom and freeze  
S and composite video output  
High quality VGA/linec to video scan converter

### Aver1000V - Pro

Works along-side existing VGA, Internal, 800x600x24-bit  
Professional video output  
Firmware for many operating systems

## Genlock and Overlay

### Overlay Output

### Aver Video Editor

External genlock and overlay  
Combine VGA graphics with video for video production  
Use it with your camcorder to produce your home videos

### Aver VideoGen

Internal genlock and overlay with professional output  
Up to 800x600x24-bit compatibility  
Works along-side existing VGA  
Firmware for many operating systems  
Great for high-end titling and graphics overlay

## Video Capture

### Aver Video Commander Series

3 versions for frame and full motion video capture  
VC1 - low cost capture board  
VC2 - high performance imaging adapter  
VC3 - full screen, full motion video capture adapter  
AveTV - Cable TV input, VGA video window

Call 1-800-278-8369 for the AVer dealer nearest you!

140-5751 Jacobite Road, Richmond, BC V6V 3M4

Telephone: 604-278-8369 Fax: 604-278-8369 Computer: 604-278-8369 Web: <http://www.aver.com>

#### Using a Computer to Edit Video



Bob Delaney uses the Media 100 video sharing system to edit sample video footage and add special effects.

Learn how Creative Technology makes it easy to edit video. Technology makes it easy to edit video. Technology makes it easy to edit video.

## Tips For Safe Computing

by Gail Tabor-Gibson

**25 Steps to Safe Computing**  
 Author: Gail Tabor-Gibson  
 Publisher: Peachpit Press  
 Price: \$29.95  
 ISBN: 0-201-88026-6  
 Release: 12 pages, 1995

Wonder how you can protect against all the things you need to do to keep your computer safe? Are you thinking about getting a new addition, device, but want to know the facts behind it? Want to know about computer hardware and software, and are wondering what you can do to protect it? You can find all of the information you need to 25 Steps to Safe Computing, a slim book concerned with facts

on how you can improve your health when working with your computer.

This is a concise follow-up to the popular (and biggest) *Safe Use Your Computer* Club First Year, a take guide of the basic information contained in *Safe Use Your* and all of the facts and facts to point them. The information in the book is up-to-date, and will tell you how to improve your office computer and how to make a difference to your health.

I take a look at common computer safety problems, such as computer viruses, software, the hardware, the user, and computer security. I also take a look at the health of the user, and how to protect it. I also give you the facts on things like electromagnetic radiation, and

your computer's ability to protect you from viruses and other threats. If you suspect you are beginning to suffer from a computer-related disease, there's also a good listing of other books and other resources to help you learn more.

A listing of hard-pair makes many of us fear we have a computer-related syndrome. Possible, but unlikely. Computer-related syndromes have gotten a lot of press — but it's less common than many other injuries associated with computer use.

— from *25 Steps*

This book is filled with good info, but you can only read it so much. It's a slim 12-page book. While you do get a lot of info with this book, most of the problems with computers are much more than a small space to take them on. On the other hand, if the subject is covered in 25 Steps, if you are looking for a lot of info on a wide range of computer-related issues, this is a good book to start. If you are looking for a book that takes a good long look at a specific issue, this is not it.

*25 Steps to Safe Computing* is filled with lots of useful information that will definitely improve the health of any computer worker who follows its tips. It covers the subject of computer health in a broad way, but without depth. This book makes for a good primer on health in the computer workplace, but will leave many people wanting more. **C**

Rating:

Content: \*\*\*

Readability: \*\*\*\*

Intended for: Beginner / Intermediate

David Rating: \*\*\*

Contact Author: Peachpit Publishers Limited  
 (415) 447-9161 WWW: <http://www.peachpit.com>

## Biff Antics: Storybook as Clipart

by Gail Tabor-Gibson

**A Day with Biff**  
 Author: Gail Tabor-Gibson  
 Publisher: Peachpit Press  
 Price: \$29.95  
 ISBN: 0-201-88026-6  
 Release: 10 pages, 1995  
 Cover art: Gail Tabor-Gibson (1995)

A storybook with a computer angle for parents? Well, why not? Peachpit Press, always one of the most innovative computer publishers, has just released *A Day with Biff*, a storybook that comes with a

storybook with a computer angle for parents? Well, why not? Peachpit Press, always one of the most innovative computer publishers, has just released *A Day with Biff*, a storybook that comes with a

**Biff is a morning dog. A slave to his get up and go routine. Start Your Morning Right, Biff says, and the Day Will Take Care of itself. Biff tends to the cliché.**

— book excerpt

This book looks at a day in the life of Biff, a dog, when dog who just happens to be a desktop publisher. Every dog has his day, and on the day Biff has to get "The Very Important Project" in to his manager. Unfortunately, Biff is having trouble finding a place to go to the dog house. He follows Biff through his day to the computer world, to avoid doing the project for his manager. In the course of the book Biff has to live, learn a few things, get lost in the streets and has to find his way out of a city center. Various events, games and more puzzles are shown throughout the book.



Biff will tell you up, and there's enough Biff to make you give up. Biff is a character who makes it to the end. The illustrations are a treat for the eye — big, colorful pictures with enough detail and humor to keep you from the book.

The stories that come with the book are filled with images from the book. While you are told to make it with your own, the colorful results of the then associated with this book's illustrations will be lost.

The book and clip art come from "Magical graphic design" by Gail Tabor-Gibson and "Magical graphic design" by Gail Tabor-Gibson. The dog Biff is a great dog and will tell you the story of his life.

If you want to make the most of the book, Biff does manage to get "The Very Important Project" finished for his manager in time.

Rating:

Content: Other content (included in artwork) is

Readability: \*\*\*\*

Intended for: Young Children

David Rating: \*\*\*

Contact Author: Peachpit Publishers Ltd. (415) 447-9161 WWW: <http://www.peachpit.com/>

## TECHNOLOGY AND REPORTS IS POWER AT Your FingerTips



- Digital Publishing
- Interactive Multimedia
- World Wide Web
- Virtual Reality
- Sound Production
- Digital Audio Post
- Video Composition
- Audio for Video
- Music Management

### COMPUTER & GMA PRESS

- Video Production
- Digital Audio Post
- Video Composition
- Audio for Video
- Music Management
- Video Production
- Digital Audio Post
- Video Composition
- Audio for Video
- Music Management

### VIDEO & FILM

- Original Video
- Motion Picture Production
- Film Editing
- Video Production & Editing

### NEW MULTIMILLION DOLLAR TRAINING CENTER

- Training Excellence Since 1979
- Careerists' Commission
- Career Planning
- Career Planning
- Full or Part-Time

**COIS**  
 CENTER FOR DIGITAL MEDIA AND SOUND  
 A Division of  
 INSTITUTE OF COMMUNICATION ARTS

3248 Bays Avenue, Burnaby, BC  
 V5C 4K4  
 COIS@FAMUINK.BC.CA  
<http://www.cois.ca>  
 Tel: 604-299-9400  
 Toll Free: 1-800-851-1400  
 Fax: 604-299-9402

JUST CALL  
**298-5400**  
 CENTER FOR DIGITAL  
 MEDIA AND SOUND

## Tools For Win 95 Power Users

by Seth Schepel-Hedberg

**Windows 95 Power Tools, 3rd Edition**  
Author: Mark Williams  
Publisher: Random House Technical Publishing  
Price: \$20.00  
ISBN: 0-679-75047-X  
Software: 688 pages / 100 Games with one CD-ROM

Now that Windows 95 is finally out, a lot of people want to know how they can use it to get things done. They just want the basics — enough to get by. That's all very well, but there is another group of people out there competing ones who want to know more than just the basics about the new operating system. These specialists don't want to know enough to just get by, they want to understand how everything works, so they can make Windows 95 fly. If you fit into the latter category, then *Windows 95 Power Tools* will appeal to you. However, the book lacks the real punch that will be demanded by hard-core users.

Windows 95 Power Tools takes a function-oriented approach to the various new tools and features of the operating system. After familiarizing you with the re-designed user interface, it then proceeds to point more closely at the finer details of the operating system. It covers topics like the functions in the expanded Control Panel, and how to use features in Network features, and will help you understand the intricacies of setting up a dial-up connection to the Inter-

net. The book's extensive file-based pages can speedily format or locate to areas of interest using some of Windows 95 special functions.

The primary purpose of this book is to explain all of the new functions built into Windows 95 for the intermediate/advanced computer user. While this book does contain plenty of useful tips, it is best used as a reference. It will give you the tools to set up DOS routines to play your favorite strategy games, but don't expect it to explain any strange symptoms you may experience when playing the game in Windows 95.

If you are looking for a book on Internet and e-mail Windows 95 tips and tricks, read the another book to appear. But if you are looking for a book that explains the nitty-gritty details of how Windows 95 works, and how to make your system the better performance, then this book will be a all-out for you.

Platform: Windows 95  
Category: \*\*\*  
Accessibility: \*\*\*  
Related to: Information Systems  
Serial Rating: \*\*\*

Contact: Random House of Canada Ltd.  
(416) 733-9477

## Basic Advice on Graphic Internet Access

by Seth Schepel-Hedberg

**The G.I.P.P.P. Connector: The Essential Guide to Graphical Internet Access**

Author: Paul Gilmer  
Publisher: John Wiley & Sons  
Price: \$22.50  
ISBN: 0-471-17024-0  
Software: 400 pages / 1998

The main reason why the Internet has become so popular is the graphically based programs that make navigating the Internet as easy as pointing and clicking on your screen. Programs like Mosaic and

Northern have made the World Wide Web the most popular way of getting around the 'Net. But that's the easy part. Unfortunately, writing up the WWW as WWW content that makes these programs possible is not easy to do, and Internet content creators begin to find it frustrating to many people if you are trying to set up an Internet

Continued on page 218

# TOP COMPUTER BOOKS

Sure you have a great computer, but our wide selection of computer books will help you get a greater user capability, troubleshoot, diagnose, maintain, upgrade, and more for Windows and Mac. We also have the most latest selection of computer magazines for every computer system.



CODY BOOKS LTD. Phone: 437-6553

**Microchannel Mail**  
Open to 6.30 per letter for  
\$1.00. 10000 Longwood Hwy  
Fort Lauderdale  
Phone: 437-5515  
(Champion Mail)  
4371 - 2000 E. Ave. South  
West  
Phone: 437-6553



When you think of computer books,  
think of us.

OTHER STORES OUR STORES

Windows Classroom	\$29.95	\$21.95
Delphi Programming Explained with Disk	\$54.95	\$45.95
New Internet Navigator	\$24.95	\$27.95
Windows 95 Inside Story	\$40.95	\$32.95
Field Guide to MS Windows 95	\$12.95	\$10.95
MS Word 6 Resource Kit with Disk - 2nd Edition	\$50.95	\$45.95
Ultimate MS Windows 95 Book	\$30.95	\$27.95
How a Computer & Internet Dictionary	\$20.95	\$18.95
Speed Edition: Using Visual Basic 4 w/CD	\$25.95	\$22.95
Visual C++ in 12 Easy Lessons w/CD	\$51.95	\$48.95



These aren't specials ... they're  
examples of our everyday prices  
on hundreds of computer books.

Books just got a lot  
cheaper in  
Surrey & Langley



We'd like to welcome you to our new location:  
**18550 Fraser Hwy. (at 190th) Surrey**  
Book Warehouse features new releases and bestsellers — all at discount prices, plus a great selection of bargain books, books and publishers overstocks — all irresistibly priced!



**ook  
arehouse**

IN GUYANA  
100 W. Broadway  
Georgetown

OTTAWA  
200 St. Jean  
Ottawa

LONDON  
1100 Upper St.  
London

BURNABY  
10000 Burnaby Centre  
Burnaby

VICTORIA  
1001 Government St.  
Victoria

BRITISH COLUMBIA  
1100 Fraser Hwy  
Surrey

# A Fresh Crop Of Windows 95 Tricks

BY PAUL EDWARDS

Finally, we're out from under Microsoft's Windows 95, and we're happily taking away with us new features. Popping up in pre-emptive multitasking and all of the new-

dated pages. Here are some of my favorite things the Windows 95 can do for you.

## Storage Icon Preview

Go to Storage icon in taskbar, when

you look at history, by this.

- From the start menu, choose run, type **FILEMOUNT**
- Click on **FILEMOUNT** icon
- Press down to **FILEMOUNT**, click on it.

- Under this you'll find **Definitions**, click on it
- On the color side of the registry screen, you'll see the location of the file to be used for storage (or the word "default")
- Click on this and change the value to **FILEMOUNT**, when you look at history with options or by opening a folder, you will see all the contents of the folder

## Folder View Menu

Don't have time to read out and spend a few thousand on new hardware as Microsoft said you wouldn't need it? This trick supposedly makes your start menu a little more useful.

- Run **REGEDIT** and create a new string under **FILEMOUNT** (Control Panel, Folder Options, click on the folder view menu, and set it to view as a file) You can set this number between 1 and 10, the latter being slower.

## Scripts

When some text, numbers or graphics from the application you are working on and drag it to the desktop. You have now created a document "script" that can be used when needed. This is great for managing documents and sharing multiple steps between applications. This seems to work with many different applications, even those which don't have applications of providing meaning between the professional information age.

## Probing the GUI

Next to the for the student class program you are looking at on our site. In Explorer, right click on an executable file (.exe) and then choose **Open** view. This will give you a hexadecimal view of the information on the program. If you understand half of it, consider a holiday.

A portion of binary Explorer's GUI keeps track of any state of the GUI for a log of events, which is how it changes state.

- Edit the **File Properties** and **Log** view with Explorer, to simply examine the two files with Explorer of your choosing which are **File Properties** and **Log**.

- To easily find out if Microsoft's new found about the GUI and the new log view under the options section of the GUI. You will need to find the "Find" view" window and to understand the editing the log view and find the file in the root of your drive (not a file, right click, click properties and check the read only file — No. Make sure you have a read file).

## Away from MSN Temptation

If you click on the new Internet Explorer's Network icon (MSN) it'll be going to get your credit card number. Last year it was from computer.

- Click on the start button, point at settings. Click on control panel, choose **Internet Options**, click on the **Content Advisor** window, click on the **Content Advisor** window and check the box, click on the "Apply" button.

## Fast Restart

Want to quickly restart Windows, but not about the entire system? Click on "Start

## PBSC

### COMPUTER TRAINING CENTRES

Hongkong Bank of Canada Bldg.  
900-885 West Georgia Street  
Vancouver, BC  
V6C 8E8  
Pte (604) 689-7272  
Fax: (604) 689-2078

## Microsoft Certified Systems Engineer Bundle

### Microsoft Certified System Engineer (MCSE)

The certification qualifies an individual in system administration, and support information systems with the Microsoft Windows NT operating environment and other Microsoft network products and management products.

### Requirements:

- Take three core Microsoft technical courses and two elective courses.
- Pass four operating system exams and two elective exams.

### Benefits of MCSE Bundle:

- Save over \$2,000.00 off the regular cost of becoming a Microsoft Certified System Engineer\*
- Receive up to \$5,000.00 (cash) of Microsoft software to help prepare for the MCSE Certification\* (while supplies last)
- Includes 5 courses and 6 exams

### Program Duration:

July 1, 1995 to December 31, 1995

**Continued Enrollment:** A continued MCSE Bundle price will be developed the next 3 years from directly under the MCSE Certification Program, and then after required to renew course. PBSC will be happy to enter a special MCSE Bundle that allow their course to be renewed.

"This is right" guarantee: If for some reason you are having trouble passing the certification exam, you may take the course again subject to availability.

Total Regular Price for required PBSC, Microsoft Certified System Engineer courses and exams

Total PBSC, Microsoft Certified System Engineer Bundle Price for required courses and exams

\$17,995.00

Prices and MCSE program content are subject to change

All applicable taxes are extra.

Call PBSC at 689-7272

### MICROSOFT OFFICIAL CURRICULUM

COURSE	For	Nov	Dec	Jan	Feb
Introduction to Windows NT Server 3.51 (Exam 70-000)	\$19.95				24-27
Windows NT Server 3.51 (Exam 70-001)	\$19.95	24-27			
Windows NT Server 3.51 (Exam 70-002)	\$19.95		24-27		
Windows NT Server 3.51 (Exam 70-003)	\$19.95			24-27	
Windows NT Server 3.51 (Exam 70-004)	\$19.95				24-27
Windows NT Server 3.51 (Exam 70-005)	\$19.95	24-27			
Windows NT Server 3.51 (Exam 70-006)	\$19.95		24-27		
Windows NT Server 3.51 (Exam 70-007)	\$19.95			24-27	
Windows NT Server 3.51 (Exam 70-008)	\$19.95				24-27
Windows NT Server 3.51 (Exam 70-009)	\$19.95	24-27			
Windows NT Server 3.51 (Exam 70-010)	\$19.95		24-27		
Windows NT Server 3.51 (Exam 70-011)	\$19.95			24-27	
Windows NT Server 3.51 (Exam 70-012)	\$19.95				24-27
Windows NT Server 3.51 (Exam 70-013)	\$19.95	24-27			
Windows NT Server 3.51 (Exam 70-014)	\$19.95		24-27		
Windows NT Server 3.51 (Exam 70-015)	\$19.95			24-27	
Windows NT Server 3.51 (Exam 70-016)	\$19.95				24-27
Windows NT Server 3.51 (Exam 70-017)	\$19.95	24-27			
Windows NT Server 3.51 (Exam 70-018)	\$19.95		24-27		
Windows NT Server 3.51 (Exam 70-019)	\$19.95			24-27	
Windows NT Server 3.51 (Exam 70-020)	\$19.95				24-27

\*Ask about our guaranteed classes

Uniting  
People with  
Technology  
in Preparation  
for Tomorrow\*



## Book Reviews

Continued from page 187

connections and even to understand how it works. The SLIPPPP Connection is the only book that comes close to being comprehensive. The fact that it is well written and easily understandable is a bonus for any reader interested in the subject.

The Serial Line Internet Protocol (SLIP) and the Point-to-Point Protocol (PPP) are the two communications protocols which can

enable your various line cards to use your

Internet service. Provider can understand

Author Paul Gilster is a veteran of the Internet

service and his profound almost highly

readable books are the best.

Gilster has a knack for breaking topics

from comprehensible English, and does so

again with this book. Gilster looks at the

advantages and the characteristics of each

communications protocol, gives good advice

on what to look for when shopping for an

Internet service, and (most importantly)

holds your hand through the process of

setting up a SLIP or PPP connection.

With this out of the way, the book then looks at what you can do once you've got your SLIPPPP connection set up. Much of the material here will be familiar to supporters of his previous books (but if you are new to the 'Net the material here will be invaluable). Gilster also points out the many differences and therefore programs available now to set them up, and what you can do with them. Here, in fact the Web, remote space, laughs from NADA viaftp or understand how to use e-mail.

If you want to set up an Internet connection, the SLIPPPP Connection will provide you with the advice you need to set things up with a minimum of grief. It also gives you the tools and the information you need to begin driving down the information highway. While this book is already beginning to date itself, if you want to understand what's going on with the graphical revolution that is taking place on the Internet, don't let this book SLIP away from you. **A**

Review

Continued from page 187

Availability: \*\*\*\*

Reviewed by: Regina/Kate reviews

Overall Rating: \*\*\*\*

Contact: John Wiley & Sons Canada Limited  
(416) 495-3840

## What You Need To Know About E-mail

by Gail Sheehy-Heath

Using E-mail Effectively

Author: Linda Lamm and Jerry Park

Publisher: O'Reilly & Associates

Price: \$14.95 (pb)

ISBN: 0-596-01044-0

October 1996 pages: 120



**O**ftentimes it is not known for producing some great books on Unix and on the Internet. Many books tend to be big, technology-oriented and very thorough. They also tend to scare people who are looking for a simple introduction to a topic. Using E-mail Effectively is part of O'Reilly's new What You Need to Know series, aimed at beginning users who might be put off by some of O'Reilly's weightier tomes. If you've just been thrown into a situation where you need to know more about e-mail, look for this book on the shelves.

Using E-mail Effectively jumps to O'Reilly's tradition of producing generally useful and comprehensive books on a topic. If you are looking for a book to teach you enough about e-mail that you'll feel comfortable about using it, Using E-mail Effectively is no sacrifice. **A**

Rating: \*\*\*\*

Content: \*\*\*\*

Reviewed by: Regina/Kate

Overall Rating: \*\*\*\*

Contact: O'Reilly & Associates Inc. 1-800-994-9130

# Computer Fair & Swap Meet

**Saturday  
November 25th  
10:00 am - 4:00 pm**

MacPherson Convention Centre  
7325 McPherson Ave.  
Burnaby, B.C.



(Using this coupon receives a \$1 discount off the regular admission. One discount per person. Not valid with any other discount.)

Absolutely the very  
best prices anywhere.

Lots of FREE Parking  
**Admission**

Adults \$5  
Students \$4  
Seniors \$4  
Children FREE

(under 12 with an adult)

Over 55 Windows  
New & Used.

Computers, Software

Printers, Hard Drives

Scanners, CD Rom's

Multimedia Kits

Peripherals, Books

and much more

Cheapest sales at 3 pm

70% off Software

60% off Books

**NEW NEW**

**Home Entertainment  
Section**

Absolutely the lowest prices on  
Name Brand Televisions,  
Video Recorders, Stereo's,  
Speakers, CD Players, Laser  
Disc Players, Cassette  
Recorders etc.



For information or  
Vendor opportunities

**275-4991**

**7 Years Same Location**



**ONE  
DAY  
ONLY**

# What's The Secret? Explains The World Around Us

BY PEDRO ARRAS

## What's the Secret?

**From** Bill Learning Software  
**Street Price** \$24.95  
**Recommended Age** 8-12  
**System Requirements** IBM 286 or better 80387  
enhanced PC Windows 3.1 (runs fine on MS-DOS 4.03) 4MB+ ram, one hard disk

Whether you are a kid and you are trying to tell your friends where you found a particularly sweet patch of clover. Are kids from you and do it?

In *What's the Secret?* you can learn how to spend time understanding how a nation's weather works, analyze how traps catch or how heat works. All these activities and more are contained into IBM's fun interactive CD-ROM, *What's the Secret?* Apply useful existing facility classes public television show.

There are a dozen topics to explore, with interesting for everyone. All the subjects are presented in a manner meant to foster thinking and experimentation. It also deals with everyday real world events that surround you from each subject a child will be a different or an unexpected experience.



moment, the result being a relatively long time spent on the modules. The level of activity is a step above the other usual click and tell programs, with different outcomes dependent on the student's actions and answers.

The content is organized so that it is easy to move into related subjects after understanding the topic at hand. In the children

usually complete each module, they are given ideas as well as some practice. To keep the content interesting, each module includes some video footage (approx. 45 minutes in total) as well as audio on every screen. For bright kids, you can even manipulate the position and the level of distance of a water

container to understand the relationship between friction, kinetic energy and potential energy.

Each module also includes a doctor's office that helps you understand how your body works or much in the subject at hand. For example, you can determine whether somebody is experiencing an allergic reaction to a bee sting or how your stomach starts to sound nerves. A simple experiment (which can be performed by hand with a few simple items) if you are still curious, the program can also recommend related books and movies pertinent to the subject like the cinema selected, it even lists occupations that are most likely to appeal to the young student.

If you have a young child in your household curious about the world, this is a must. It will not take the place of a magazine, but it will complement one nicely. If you find your life is busy for the speed of the human brain, memory and flight which is due to be released about the time you read this. ☐

Contact: IBM (800) 4-IBM

## PC Video Capture Board

Continued from page 165

dropped. Another good board with points worth the multiple inputs and Precision 15 handled that points for the different and long set up time.

Contact: Creative Labs 1801 McCarthy Blvd  
Milpitas, California 95035 (408) 398-1000  
**Product:** Intel Smart Video Recorder  
**Price** \$149.95  
**Info** (408) 398-1000

Intel's Smart Video Recorder (PC) is a board that enables business-capture boards when Adobe Premiere is in digital video editing. It installed simply and effectively with no jumpers to configure with. It comes bundled with a digital video editor and capture utility. It has two inputs: a composite and an S-Video. For all its features, it performed perfectly well stopping a single frame throughout. Freezing video while editing is being captured is not a problem. It also comes bundled with Digit-Itz, which is a collection of over 150 MB of royalty-free video, stills and audio. An excellent board with excellent performance at its excellent price.

Contact: 5250 Wilson College Blvd., Santa Clara, California 95050 (415) 962-6222 (950) 429-2222

# Mac Demo Sale

## Macintosh® Solutions for Creative Professionals

Paul Gossett Consulting, Inc. has extensive experience in creating, programming and installing digital video systems. We are a team of professionals with years of experience in this field.

- Broadcast Digital Video
- Digital Audio • Web Pages
- Design • Prepress • CAD
- WorldScript Multi-language

We offer competitive pricing and a single source for hardware, systems, installation and support.

Get more knowledge and developing from worldwide with our video. For a quote, contact our sales or service staff or 800-555-5555.

## Demo Presentation Systems

PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000

## PowerLite

PowerLite 10000 10000  
PowerLite 10000 10000

## Drive & Print (reader)

PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000  
PowerLite 10000 10000

\$1000.00  
\$1000.00  
\$1000.00  
\$1000.00  
\$1000.00  
\$1000.00  
\$1000.00  
\$1000.00

8500<sup>120</sup> 8/16 \$5571.00  
9500<sup>120</sup> 8/16 \$5882.00

Large 2000 Broadcast Digital Video

Large 2000 Broadcast Digital Video \$7999.00

Large 2000 Broadcast Digital Video \$11,999.00

Complete Digital Video Production Setup

PowerLite 10000 10000 Digital \$1000.00  
PowerLite 10000 10000 10000 \$1000.00

PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000

PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000  
PowerLite 10000 10000 10000



PAUL GOSSETT CONSULTING INC.

10000 10000 10000 10000 10000 10000 10000 10000

PowerLite 10000 10000 10000 10000 10000 10000 10000 10000



# This is IT, Vancouver!

Everything IT takes to keep your organization competitive...

Over 300 of the world's leading computer and communications companies!

Thousands of product solutions — Windows 95, Alpha and PowerPC chips, Client/Server, Business Telephony, Mobile and Mainframe Computing, and more!

Three NEW Dedicated Divisions — Communications, Multimedia, and COMDEX/IMay — The On-Line Services Showcase!

Live, hands-on Internet demonstrations — featured at the Internet Experience, a part of the COMDEX/IMay.

The world's #1 IT educational conference delivering the knowledge and solutions your organization needs to get ahead and stay ahead!

Two major keynote on the latest IT trends and issues affecting the industry...and your



Register  
Today!


COMDEX/IMay is the largest computer and communications trade show in North America.

COMDEX/IMay is the only trade show in North America that offers a comprehensive selection of products and services from leading manufacturers and distributors.

## COMDEX/PacRim'96

Serving the Information Technology Professionals of the Pacific Northwest

January 10-18, 1996 • Vancouver Trade & Convention Centre • Vancouver, British Columbia



**AO**  
L<sub>1</sub> (13)

Now, it's stop multimedia shop!  
Hundreds of interactive  
products to choose from!  
CD-ROM, Video CD  
CD-i • 1-800-888-8888

**Lease or Cancel!**  
It's okay to have fun with  
multimedia the  
**\$123 LESS!**

**Full Screen  
Full Motion**

**VIDEO-CD-ROM**  
Buy just the Video CD and  
leave your tape in the VCR!

3 Years \$123 (plus  
shipping & taxes)

**CALL NOW FOR OUR  
FREE  
1-800-888-CITY**  
Gift Set

**Order Now!**  
Real Interactive "G-Games"  
Multiple games on one CD  
**Superior Quality \$29.95**  
For a limited time only!

Eligible orders to receive special price.

**ORDER FORM**

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_  
Post Office \_\_\_\_\_  
Zip \_\_\_\_\_  
E-mail \_\_\_\_\_  
Signature \_\_\_\_\_  
(A stamp from your local 1-800-888-8888)

**SEND ME (check one)**

<input type="checkbox"/> <b>Full Interactive "G-Games"</b> 3 Years \$29.95	<input type="checkbox"/> <b>Video CD-ROM</b> 3 Years \$123 (plus shipping & taxes)	<input type="checkbox"/> <b>Free Interactive "G-Games"</b> 3 Years \$123 (plus shipping & taxes)
---	--	--

1-800-888-8888

[illegible]

# We Make it Digital

...AND IT WORKS

...on a digital

**Universal Document Solutions**

- Real-life Concerns...
  - High Volume Document Scanning...
    - Scanning...multiple users...
      - monthly...monthly
  - Flexible Imaging...
    - Imaging of Documents...
      - Online Linking...
        - Full Text Search...
          - Options

The Library Information Management, in turn, streamlines your workflow, provides the power and flexibility of a digital filing system and so on and so forth

## Western

INFORMATION MANAGEMENT

**DOCUMENTS** for information management and imaging of your documents

**LIBRARY** for library management and imaging of your library

1-27 (toll-free) Tread: 800-888-8888 Fax: 800-888-8888 Phone: (800)888-8888  
 Email: [sales@westerninfo.com](mailto:sales@westerninfo.com) Web: [www.westerninfo.com](http://www.westerninfo.com)

[illegible]

## CD-ROM Software Sale


**1-800-578-7684** THURSDAY, 10/24/91 MONDAY, 10/29/91

									
129	139	155	155	179	179	179	179	179	179

									
129	139	155	155	179	179	179	179	179	179

**Call for Free Catalogs**

**A LIFETIME OF SUPERIOR DATA STORAGE**




**RELIABLE & DURABLE  
MICRO FLOPPY DISK**

- 100% tested & certified error free with full lifetime warranty
- 2 5 1/4", 2HD, High capacity, ANSI formatted, boxed 10000 bulk
- Duplicate service available

**TOK CD-RECORDABLE DISC:**

- CD-RW 650MB TOK based
- Best competitive prices in Canada





**HYUEN Canadian Enterprises Ltd.**  
 Manufacturer & Supplier  
 240 - 11185 Sheppard Ave. (East), Markham, ON L3R 9T2  
 Tel: (904) - 278-8888 Fax: (904) - 278-8889



2-Brand Opening

# DISCOVERY MULTIMEDIA, INC.

101 West Broadway, Vancouver, BC V6B 2G7  
 (604) 681-2377  
 FAX: (604) 681-2374



American Talking Dictionary	\$29	Encyclopedia 4.0	\$29
Arts Alive!	\$29	Compu's Interactive	
Clipart Compendia	\$29	Encyclopedia	\$29
Day of the Tentacle	\$29	Family Doctor 3d SE	\$19
Indiana Jones II	\$19	Leonard the Inventor	\$29
Learn Textiles	\$47	Planet Flying	\$27
San City 2000	\$29	Smart Storeware	\$32
World Atlas 5.0	\$17	Webster's Interactive	
Writer's Teacher Trouble	\$29	Encyclopedia	\$19

# Rockwell Computers Inc.



- Large selection of Microsoft computers
- IBM, Compaq, Toshiba, NEC & many more
  - 386/486/586/68030 & Process processors
  - Monitors, CRTs & Active Matrix Color
  - New, used & Gateway International units
  - All include manufacturer's warranty
  - Service & charges included
  - Also include DOS, Windows & Macintosh on PC card slot

→ Bargain Prices. Call 733-4369

# Fuser Assemblies



Dealer price less

**\$79.00**

with 4 month warranty

Call for low volume prices on most laser printers (parts and accessories)

Selling now wholesale for price and quality

Commercial Laser Technologies (816) 633-6366

# NPSNET

BC's Premium Internet Service Provider

INTERNET ACCESS  
 \$14 per month

"Internet access that makes sense"

## Special Introduction

- Includes 200 hrs. 24hr. no. support
- Includes 100 hrs. 24hr. no. support
- Includes 100 hrs. 24hr. no. support

## Programs Available

- web site design \$25.00
- web site hosting \$25.00
- web site design \$25.00

- no busy signals
- no cable installs & training
- direct satellite server feed
- www home pages

Call now for current information

Web 213 2694  
 Toll-free 1-800-310-0300  
 http://www.npsnet.com  
 info@npsnet.com



# AKON COMPUTER SERVICES

Tel: 299-1048  
 Fax: 299-1050

1101 - 12th Computer Road  
 Burnaby, B.C.  
 V5C 2M7  
 e-mail: akon@compuserve.ca

- Free on-site and home area on-site computer support
- Free on-site installation with complete system purchase

## Pentium Bare Systems from \$1733

Intel C240	\$1499	Base System Includes:	
Intel C240-100	\$1599	• 100% CPU & Motherboard	
Intel C240-133	\$1699	• 1 MB RAM	
Pentium P-100	\$1733	• 1 MB HDD	
Pentium P-133	\$1899	• 101 Keyboard and Mouse	
Pentium P-166	\$2049	• 1M PCI VGA Video Card	
Pentium P-166	\$2199	• Mini tower software Supply	
		• 101-101-101	

## Hard Drives

Quantum 100M	\$299
Quantum 133M	\$329
Quantum 166M (ECC)	\$409
Quantum 200M (ECC)	\$479
Quantum 266M (ECC)	\$599
WDC 100M	\$299
WDC 133M	\$329
WDC 166M	\$409

## CD-ROM

TRAC 4x 120MB	\$299
Powermax 2x 120MB	\$499
Powermax 4x 120MB	\$699
WDC 4x 120MB	\$499
WDC 4x 120MB	\$499

## Fax Modem

28K modem 28.8K \$299.99  
 33.6K modem 33.6K \$349.99

## Video Cards

PCI 100MHz 1M VRAM	\$199
PCI 100MHz 2M VRAM	\$249
PCI 100MHz 4M VRAM	\$299
PCI 100MHz 8M VRAM	\$349
PCI 100MHz 16M VRAM	\$399
PCI 100MHz 32M VRAM	\$449
PCI 100MHz 64M VRAM	\$499

## Motherboards

Optiplex 100MHz	\$199
Optiplex 100MHz	\$199
Optiplex 100MHz	\$199
Optiplex 100MHz	\$199
Optiplex 100MHz	\$199
Optiplex 100MHz	\$199
Optiplex 100MHz	\$199

## PENTUM 90/66MHz LIQUIDATION

PC SYSTEMS & LAPTOPS

WE HAVE A LARGE STOCK OF PENTUM 90/66MHz SYSTEMS & LAPTOPS AT BARGAIN PRICES. CALL US TODAY TO SEE OUR STOCK.

DESKTOP & ACCESSORIES

WE HAVE A LARGE STOCK OF DESKTOPS & ACCESSORIES AT BARGAIN PRICES. CALL US TODAY TO SEE OUR STOCK.

CALL US TODAY TO SEE OUR STOCK

100-100-100

## DISKETTES

10, 25 and bulk packs (we specialize in custom packaging)

- ANSI and High Capacity grades
- Over 10 colors to choose from
- Mac Formatted available
- Dealers, distributors and software production houses only
- Call for our September Special (ends Sept. 20)

PROTECH Marketing Inc.

100-100-100





## Learn to Excel

Go the next step of Microsoft Excel 3.0 through Personalized Seminars and Customized Business Workshops

Credentia Consulting  
William Credentia BBA, MS, A  
will\_credentia@earthlink.net



Phone: 317-8277

## DATABASE SPECIALISTS

Access • FoxPro • Visual Basic • Excel

**Microsoft**  
CUSTOMER SERVICE

ComputWork Pacific Inc.

Custom application development • Training • Since 1988

705 - 1112 West Pender

604-8211

## When You Need A Pro ...

Consulting Services

Networking

Installation • Hardware

• Software

Database design & Upgrading

Security • Backup • Restore



Programming

Developer/Software for  
DOS & Windows • Using  
Microsoft Access/Excel

Apple's Languages  
PowerPC/Java • Windows

Available from remote

303 Delcorwood Dr.

Al Doman P.Eng. (604) 936-5578

## TOP NOTICE PROGRAMMER



Technical Excellence  
Friendly Service  
Guaranteed

**FoxPro, MULTIMEDIA**

Programming and Training  
Call Dave Nelson

**230-4853**

## ECL COMPUTING



REPAIR • SERVICE • MAINTENANCE



"No solution... No charge" Guarantee

Tel: 204-1124 Fax: 202-0526

2175 Glenville St. Winnipeg

## "SPECIALIZING IN MICROSOFT OFFICE PROFESSIONAL"

Word • PowerPoint • Excel • Access

Training  
Consulting

Database Development

Windows Macintosh

Phone: (904) 994-1001 • Fax: (904) 994-1009

E-mail: [info@computerconsultants.com](mailto:info@computerconsultants.com)

## INTELLIGENT SOFTWARE ENGINEERING

Creators of Award Winning Software

Specializing in C/C++ Development

- Windows/DOS
- Database
- Mathematical
- Real-time
- GUI development
- Custom software

Design • Development • Consulting

Winnipeg: 733-3800 • Telcel: 884-4344

## Phil Kushnir

Macintosh Consultant

On-site service from 1980 to present

Phone: 604-291-8812 • Cell: 291-8812

Website: <http://www.441-745.com>

[phil@philkushnir.com](mailto:phil@philkushnir.com) • <http://www.441-745.com>

## Installation, Training, Support

**Microsoft**  
**WINDOWS NT**

- Successfully installed over 100 Windows NT PCs
- Experienced with NT, Windows 95 and 98
- All staff members are formally trained, full-time professionals
- Free day, quality service with 100%
- Refundable support

Delta Corp. Tel: (844) 651-0100 Fax: (844) 650-0100

Suite 101, 284 Westridge Dr., Vancouver, BC

## Microsoft

**ACCESS**



Design and development of custom software for:  
• Database management  
• Windows/MS-DOS and 32-bit  
• Distributed database applications  
• Server or client database applications

BCP SYSTEMS CONSULTANTS INC.

PH: 607-6500 FAX: 607-6570

## Integrated Data Systems Ltd.

System Analysis  
Design/Development  
Programming & Development  
Documentation  
Training  
Ongoing Support

Data Base  
MS SQL  
MS Access  
Power Project  
MS Project  
Visual Program 6.0

Robert J. Higgins (416) 675-4445

[rhiggins@integrated.com](mailto:rhiggins@integrated.com)

## Programming, Training, Support

**Microsoft**  
**ACCESS**  
SQL Server

- Successfully implemented over 80 Access databases
- Experienced with both 32-bit and 64-bit Access applications
- Specializing in Microsoft MS SQL Server
- All staff members are formally trained, full-time professionals
- Providing quality service with 100%
- Refundable support

Delta Corp. Tel: (844) 651-0100 Fax: (844) 650-0100

Suite 101, 284 Westridge Dr., Vancouver, BC

## PROGRAMMING AND SUPPORT



- Computer Consulting
- Management Information Systems
- Windows • MS • Corel/Parsons
- Visual Basic for Windows/DOS/MAC
- WWW Home Page Setup

**DATATEX SYSTEMS CORPORATION**

1000-1000-1000-1000

1000-1000-1000-1000

## HARDWARE

**SYSTEMS**

Complete software development design  
DOS, Windows, Unix  
C/C++ • Pascal, Fortran  
Internet consulting and development

Call 730-4827

Tel: 730-4827 • Email: [info@hardwaresystems.com](mailto:info@hardwaresystems.com)

## Don't Reinvest the Wheel

**FoxPro**  
DOS/Windows/Unix

Call Neil Rempel, CMAA, Senior Analyst

Protek Data Systems Inc.

41, 11100 Transpore Way, Richmond, BC

PH: 370-7234 FAX: 270-0945

Complete Systems & Customization

## Macintosh Consulting and Programming

**Peak**  
Computing  
Services



Adam Sim

Phone: 946-7094 Fax: 946-7017

Email: [peak@mtelink.net](mailto:peak@mtelink.net)

## Computer Telephony Expert



Interactive Voice Response (IVR)  
Fax-on-demand  
Intranet • Internet • Database  
Data Collection  
Fax-to-speech

We provide complete custom designed systems to add these great and free phone applications available today

2 Logical Software Corporation 521-8168

## GRANTS

Provide a complete overview of grants writing and funding opportunities. We provide a complete overview of grants writing and funding opportunities. We provide a complete overview of grants writing and funding opportunities.

Business Consulting & Associates  
1-800-451-4141 (24 hours)

Internet: <http://www.grants.com>





## Index of Advertisers

<b>Advertising</b>		<b>Telecommunications</b>	
Advertising Agencies	100	Telephone Equipment	100
Advertising Circulation	100	Telephone Numbers	100
Advertising Rates	100	Telephone Service	100
Advertising Sales	100	Telephone Systems	100
<b>Automotive</b>		<b>Transportation</b>	
Automotive Insurance	100	Automotive Insurance	100
Automotive Sales	100	Automotive Sales	100
<b>Banking</b>		<b>Automotive Service</b>	
Banking Services	100	Automotive Service	100
Banking Systems	100	Automotive Service	100
<b>Business</b>		<b>Automotive Service</b>	
Business Insurance	100	Automotive Service	100
Business Services	100	Automotive Service	100
<b>Construction</b>		<b>Automotive Service</b>	
Construction Insurance	100	Automotive Service	100
Construction Services	100	Automotive Service	100
<b>Education</b>		<b>Automotive Service</b>	
Education Insurance	100	Automotive Service	100
Education Services	100	Automotive Service	100
<b>Finance</b>		<b>Automotive Service</b>	
Finance Insurance	100	Automotive Service	100
Finance Services	100	Automotive Service	100
<b>Food</b>		<b>Automotive Service</b>	
Food Insurance	100	Automotive Service	100
Food Services	100	Automotive Service	100
<b>Health</b>		<b>Automotive Service</b>	
Health Insurance	100	Automotive Service	100
Health Services	100	Automotive Service	100
<b>Home</b>		<b>Automotive Service</b>	
Home Insurance	100	Automotive Service	100
Home Services	100	Automotive Service	100
<b>Insurance</b>		<b>Automotive Service</b>	
Insurance Services	100	Automotive Service	100
<b>Legal</b>		<b>Automotive Service</b>	
Legal Services	100	Automotive Service	100
<b>Manufacturing</b>		<b>Automotive Service</b>	
Manufacturing Insurance	100	Automotive Service	100
Manufacturing Services	100	Automotive Service	100
<b>Medical</b>		<b>Automotive Service</b>	
Medical Insurance	100	Automotive Service	100
Medical Services	100	Automotive Service	100
<b>Real Estate</b>		<b>Automotive Service</b>	
Real Estate Insurance	100	Automotive Service	100
Real Estate Services	100	Automotive Service	100
<b>Retail</b>		<b>Automotive Service</b>	
Retail Insurance	100	Automotive Service	100
Retail Services	100	Automotive Service	100
<b>Technology</b>		<b>Automotive Service</b>	
Technology Insurance	100	Automotive Service	100
Technology Services	100	Automotive Service	100
<b>Travel</b>		<b>Automotive Service</b>	
Travel Insurance	100	Automotive Service	100
Travel Services	100	Automotive Service	100
<b>Utilities</b>		<b>Automotive Service</b>	
Utilities Insurance	100	Automotive Service	100
Utilities Services	100	Automotive Service	100

## Decisions Decisions



1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

**P90 MPC**

- Intel Pentium III processor
- PCI local-bus slots
- IDE hard drive
- EIDE hard drive
- 3.5" floppy drive
- Quad-bus-speed CD-ROM drive
- Dual-channel-dual-access speakers
- 16MB SDRAM sound card
- 66M PCI VGA video card
- 14" non-extended monitor (200g)
- 1 Parallel (2 - 1655 Serial Ports
- Modems: 56 and 14.4k
- 3 Year Limited Warranty

90 MHz

## CCL P90 MFC

**\$2288**

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.

**P100 MPG**

- Intel Pentium 133 processor
  - PCI local bus slots
  - 16MB RAM
  - High-capacity hard drive
  - 2.5" floppy drive
  - Quick-Dial speed CD-ROM drive
  - Dual 16-bit stereo sound speakers
  - 16-bit 3D stereo sound card
  - 16MB PCI VGA video card
  - 10" touch-sensitive monitor, 256K
- Parallel 1 - 16550 Serial Ports
- Windows 95 and Macos
- 3 Year Limited Warranty

100 MHz

## 07 P100 MFC

**\$2388**

11. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

**P120 MPG**

- Intel®Pentium® III processor
- PCI local bus slots
- 8MB RAM
- 1524Kbyte hard drive
- 2 1/2" floppy drive
- Quad 100 speed CD ROM drive
- Dual 16MB 66MHz/100MHz speakers
- 16-bit Stereo sound card
- 6MB PCI VGA video card
- 14" SVGA monitor 3Mfp, 60Hz/CM
- 1 Parallel / 2 USB Host Ports
- Windows 95 & Mouse
- 3 Year Warranty, 8 x 11 Support

120 MHz

## 00 P130 MPF

**\$2788**

**Abstract**



## Feature Offer!

Receive two free Software titles



© 2006 The Authors  
Journal compilation © 2006 Blackwell Publishing Ltd

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

UBC	SURREY	KELOWNA	VICTORIA
2781 Westside Parkway FAX 228-4038	10740 King George Hwy FAX 584-8383	41-523 Saltspring Ave. FAX 862-4083	48-0811 Bridge St. FAX 828-0638
<b>228-8080</b>	<b>584-8080</b>	<b>862-3188</b>	<b>820-8828</b>
CALGARY (403) 266-2882 / EDMONTON (403) 453-2882			

[illegible]

1000

1998年12月15日

<sup>1</sup> *Journal of Management Education* 25(10):1139-1150.

# SOFTWARE ALLEY

CANADA'S SOFTWARE AND HARDWARE CHOICE!

SYSTEMS ALLEY

**COMPAQ**  
AUTHORIZED DEALER

## Presario

334 CDS	Integrated	CORE 400 MMX	\$2099
732 CDS	Celeron	P75 MMX	\$2199
944 CDS	Tower	Quad 6044-90 MMX	\$2499
945 CDTV	Tower	Quad 6044-90 MMX	\$2149
978 CDTV	Tower	Quad P75 MMX	\$2529
982 CDS	Tower	Quad P60 MMX	\$2699

Monitor Not Included in above Prices!  
Ask for Shipping on Printers, Designers and Desktop Systems

digital



Celeron GL 9103ST

Mini Tower  
P75, 100MB Hard Drive  
16MB SDRAM  
Modem (Optional)  
Quad 6044-90  
Price: \$2199

Celeron GL 9103ST

Mini Tower  
P75, 100MB Hard Drive  
16MB SDRAM  
Modem (Optional)  
Quad 6044-90  
Price: \$2199

\$4395  
Monitor Not Included

\$4795  
Monitor Not Included

DLC Colorwriter 5000

DLC Laser 5000

**AIR**

Software, Hardware, and Services

Call for Shipping on Printers, Designers and Desktop Systems

**Canon**

BJC - 4800

High Performance Inkjet Printer

Call for Shipping on Printers, Designers and Desktop Systems

**Canon**

BJC - 4800

High Performance Inkjet Printer

Call for Shipping on Printers, Designers and Desktop Systems

**Canon**

BJC - 4800

High Performance Inkjet Printer

Call for Shipping on Printers, Designers and Desktop Systems

## BUSINESS ALLEY

Microsoft Office Standard	\$429.95	Upgrade	\$429.95
Microsoft Office Professional	\$799.95	Upgrade	\$499.95
Microsoft Word	\$399.95	Upgrade	\$199.95
Microsoft Excel	\$399.95	Upgrade	\$199.95
Microsoft Project	\$399.95	Upgrade	\$199.95
Microsoft Access	\$399.95	Upgrade	\$199.95
Microsoft Backstage 1995	\$Call	Upgrade	\$199.95

## The Choice is yours at Prices you Can Afford!

Microsoft Works for Windows	\$39.95	Norton Antivirus Win95	\$109.95	Upgrade	\$39.95
Lotus 123	\$Call	Norton PG Anywhere	\$179.95		
ACT!	\$Call	Genetti	\$59.95		
Maximizer	\$139.95	Windows Pro V.4.0	\$109.95		
WordPerfect	\$Call	Procom Plus 2.11	\$109.95		
Supply Acad. Dos/Win	\$149.95	Microsoft Encarta 1995	\$Call		
3D Home Architect	\$Call	Quicken for Windows	\$Call		

## ENTERTAINMENT ALLEY

Phantomagoria	\$74.95	ThunderScope	\$74.95	Under Pressure	\$39.95
Di Match - DOOM II	\$24.95	Star Trek Omnigedia	\$72.95	Orion Conspiracy	\$74.95
Wastewar V Comanche	\$79.95	Prisoner of Ice	\$72.95	All Star Baseball	\$54.95
Mach Warrior 2	\$52.95	Lords of Midnight	\$79.95	Broadcast Blast Baseball	\$61.95
Marine Fighters	\$39.95	Battle Beast	\$74.95	The Skin Game	\$59.95
Ultimate Football 95	\$49.95	Space Quest II	\$64.95	Fight Unlimited	\$73.95
Petal	\$64.95	Mirage	\$61.95	Fight Simulator	\$Call
Apache	\$69.95	Paras in the Dark	\$59.95	Myot	\$Call

**Canon** **digital** **IBM** **COMPAQ** **AIR** **IBM**

**Prices may be lower in store!**

**Our Commitment to you on Quality and Service!**

**ALLEY HOURS**

**Corporate Terms Available**

**Convenient Payment Plans Available**

# The ultimate mobile power machine...

Now shipping  
**Windows 95**  
10/4/94



## OpenNote - 575

- Intel® 730MM Pentium processor
- LCD dual scan colour screen
- Simultaneous LCD & CRT display
- MMX 6MM exp. to 40MM on board
- 340MM hard drive (70MM or 1.2GB optional)
- 3.5" high density floppy drive
- MMX local bus video
- PCMCIA type II and III slots
- Built-in track ball pointing device
- Built-in 16-bit sound card
- NE4 PCMCIA fax modem
- Adaptive AC-EMIO fast SCSI controller
- Serial & parallel ports, docking bay port
- external keyboard and monitor ports
- rechargeable 9MM battery, AC adapter
- Speaker & microphone jacks
- Carrying bag, car cigarette cable
- Windows 95 can be loaded

**\$2,999**

**Table 1**

It's no surprise that Canada's leader in value priced desktop computers is introducing the country's first affordable colour notebook with a Pentium processor. What's surprising is the awesome power and functionality that's packed into the new HP OmnNote!

Powered by a 25 or 100MHz Pentium processor, the OpenNode has



all the techie features you're looking for — PCMCIA slots, a built-in 16-bit audio system, local bus video — plus room for 40 megs of RAM.

More importantly, the OpenNote is a comfortable fit anywhere you take it. The rechargeable battery with an AC adapter, plus the built-in pen rests and three button track stick will keep you happily non-hostile a whole lot longer.

And the OpenNode has ports and connectors to plug in everywhere. Add a keyboard or a monitor, or plug in up to seven SCSI devices... the OpenNode is an incredibly versatile computer!

So check out this ultimate mobile power machine at your local authorized UPS dealer or dial 1-800-547-7411 for more info.

Building quality PCs in Canada for over 18 years.



Under the power of an old man's  
 shoulders with new shoulders



**IPC**  
NOTEBOOK  
COMPUTERS

© 1999 Blackwell Science Ltd  
Journal of Internal Medicine 245: 395–401

[illegible]

© 2006 The Authors  
Journal compilation © 2006 Blackwell Publishing Ltd

© 1994 Blackwell Science Ltd, *Journal of Internal Medicine* 235: 395–401

# MY Internet ACCESS KIT

**US Robotics**  
The Robotics Division of 3Com Corporation



## The Internet Surfboard

Access the information highway with U.S. Robotics, manufacturer of the world's best-selling V.34 modems!

- **Speedy** - The new computer with a megabyte of memory
- **Secure** - Connect via SecureNet for maximum safety in the online public space
- **Surf** - Surf the Net like never before with better interactive performance

Access online information like it never goes away in a secure, safe way for the information world. Access the world's information highway. Surf the information world.

**Sportster Vx 28.8 Fax modem with Parallel Voice Mail**

Available at a computer retailer near you!

## Canada Internet Direct Inc.

Info: <http://www.cidi.ca>

Fax: (504) 881-1805

Modern Dial-up Numbers:

Vancouver: (604) 852-5500

Admission available

Victoria: (604) 380-0164

Kelowna: (800) 762-0371

Calgary available

**CALL NOW: 1-800-987-8884**

© 1997 Canada Internet Direct Inc. All rights reserved. Canada Internet Direct Inc. is a registered trademark of Canada Internet Direct Inc. All other trademarks are the property of their respective owners.

# iNTERNET DIRECT

## INTERNET Reference Guide

Arthur Eisenstat & Roberts Editor

### Inside

- Accessing the Internet
- Choosing an Internet Provider
- Detailed Internet Diagram
- Flat Rate Access vs. Metered Access
- Internet Facts

Issue 1

## virtual vocabulary:

- **FTP** - File Transfer Protocol: A standard network protocol for transferring files between a local computer and a remote computer on a network or across a network.
- **World Wide Web** - A system of interlinked hypertext documents accessible via a computer network.
- **Browser** - Software used to access and view web pages on the World Wide Web.
- **Web Page** - A document or resource located on the World Wide Web, typically containing text, images, and other multimedia.
- **Hypertext** - Text that contains links to other documents or resources, allowing users to navigate between them.
- **HTML** - Hypertext Markup Language: The standard language for creating web pages.
- **Download** - The process of transferring data from a remote computer to a local computer.
- **FTP** - File Transfer Protocol: A standard network protocol for transferring files between a local computer and a remote computer on a network or across a network.
- **Navigation** - The process of moving through a series of web pages or documents.

## Other Internet Providers

### Flat Rate Service

Flat rate service is a type of Internet service where you pay a fixed fee for a set amount of time or data usage, regardless of how much you actually use. This can be a good option for users who have a consistent need for Internet access.

Other Internet Providers include:

- **Comcast**
- **Earthlink**
- **Netcom**
- **Prodigy**
- **Worldnet**

For more information on these providers, visit our website at <http://www.cidi.ca>.

**GET CONNECTED 1-800-987-8884**

